

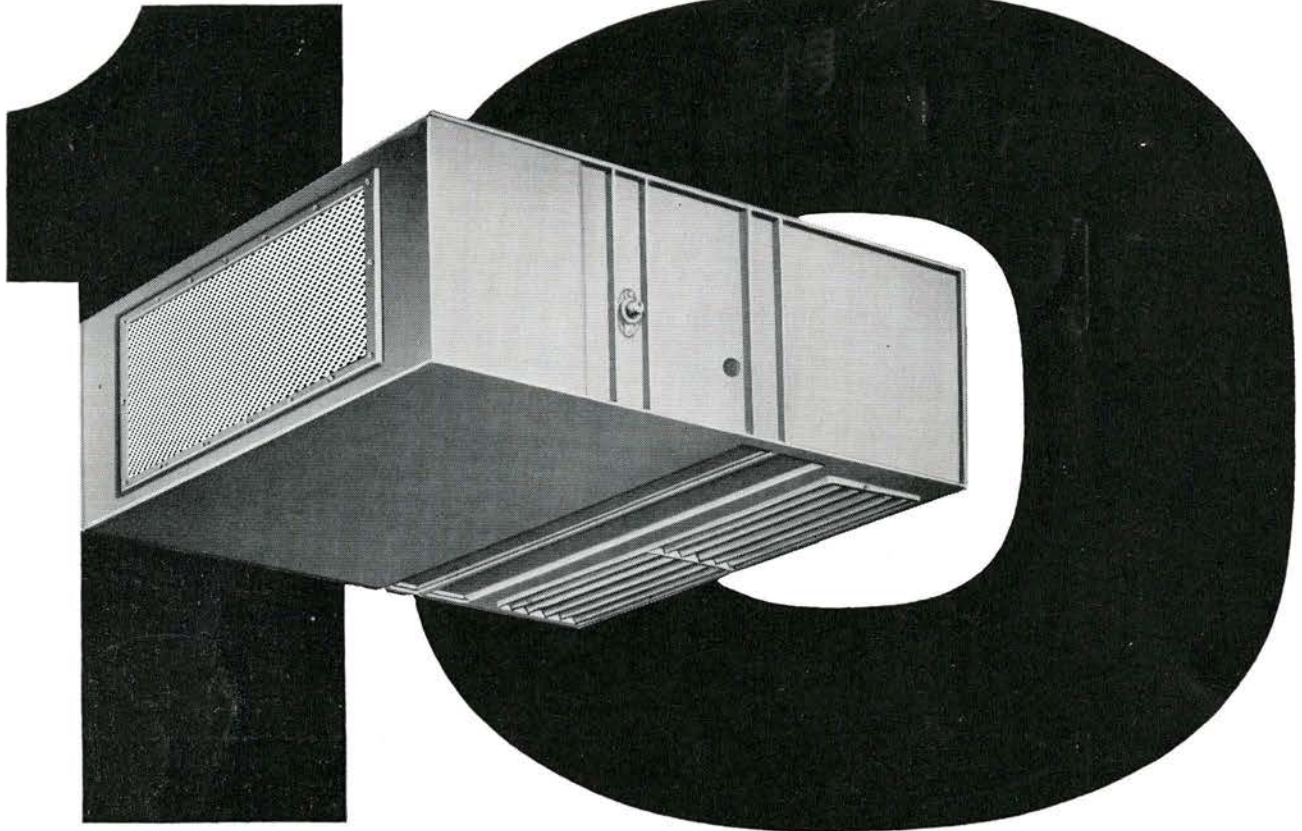
ROYAL
ARCHITECTURAL
INSTITUTE
OF CANADA
JOURNAL



OCTOBER 1961

ROYAL ARCHITECTURAL INSTITUTE OF CANADA
INSTITUT ROYAL D'ARCHITECTURE DU CANADA

today there are



new reasons to specify Trane Torrivalent

TRANE TORRIVENT—Heating and Ventilating for Schools, Factories, Auditoriums, Churches, Office Buildings, Warehouses, Garages, Institutions.

Trane is always making good products better. Many months ago, Trane engineers began a major improvement program for their famous Torrivalents. Today, as a result, there's a new, vastly improved Torrivalent unit. In 10 ways—and more—it's the best Trane has ever built. Judge for yourself:

- **New Models:** Choose from 17 sizes, one to fit your job exactly. Btu.s from 20,000 to 3,800,000. One, two or three fans . . . cfm to 54,000. Six models: vertical floor, horizontal ceiling, inverted ceiling, horizontal floor, vertical wall, inverted wall.
- **New Size:** Compact is the word—these new Torrivalents are up to 20% smaller.
- **Lifetime Bearings:** Bearings are permanently sealed and lubricated to last a lifetime. No more bearing failures—ever!
- **Balanced Fans:** The entire fan section—fans, shaft, bearings, motor and drive—is balanced as a complete assembly to 1/1000th of an ounce inch. Operation is quiet, vibration-free.
- **Hollow Shafts:** Reduces weight, eliminates need for intermediate bearings.
- **Sectionalized Construction:** Greater flexibility, permits use of any of the matched components or accessories.
- **New Coil Design:** New Trane Sigma Flo Coil assures better heat transfer. One row of tubes meets most capacity requirements.
- **Advanced Fan Design:** New fan design means peak efficiency. Lower horsepower requirements mean better economy.
- **Easier Maintenance:** Maintenance is seldom needed, but when it is Trane makes it easy. Coils, and other parts easily removed.
- **Rugged Construction:** Casing and accessories are uniframe construction, with heavy gauge phosphatized steel. Coils have heavy semi-steel cast headers with tubes rolled and bushed for longer life.

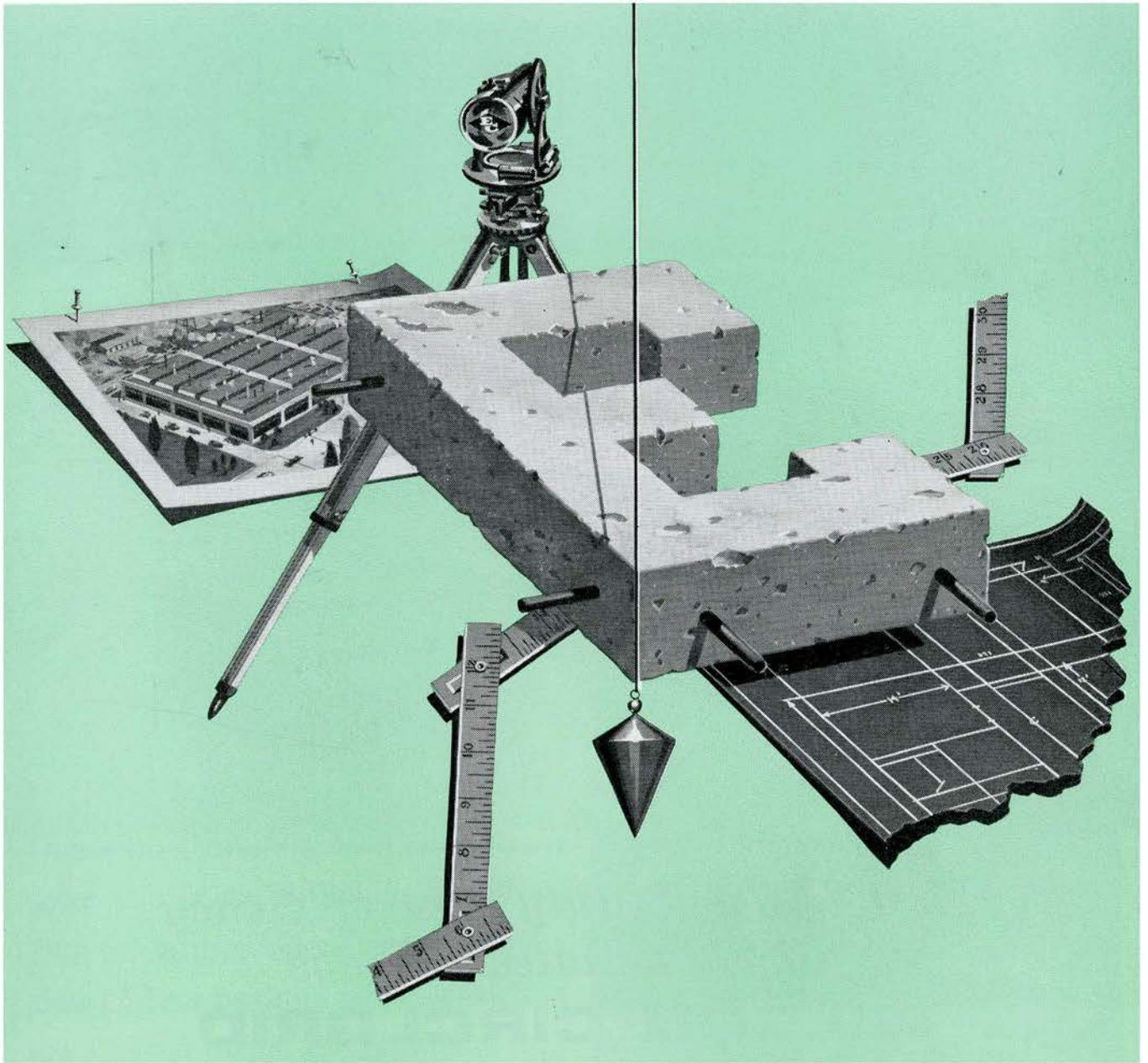
The New Trane Torrivalent Line is ready for immediate delivery. Ask your nearby Trane sales office for complete facts on the Torrivalent line, or write: Trane Company of Canada, Limited, Toronto 14.



TRANE

TRANE COMPANY OF CANADA, LIMITED, TORONTO 14

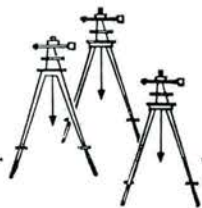
Manufacturers of air conditioning, heating, ventilating and heat transfer equipment.



Craftsmanship in Construction

Fine buildings reflect the crafts and the skills of the men who build them. That is why you will always find top-notch tradesmen and supervision on Eastern projects.

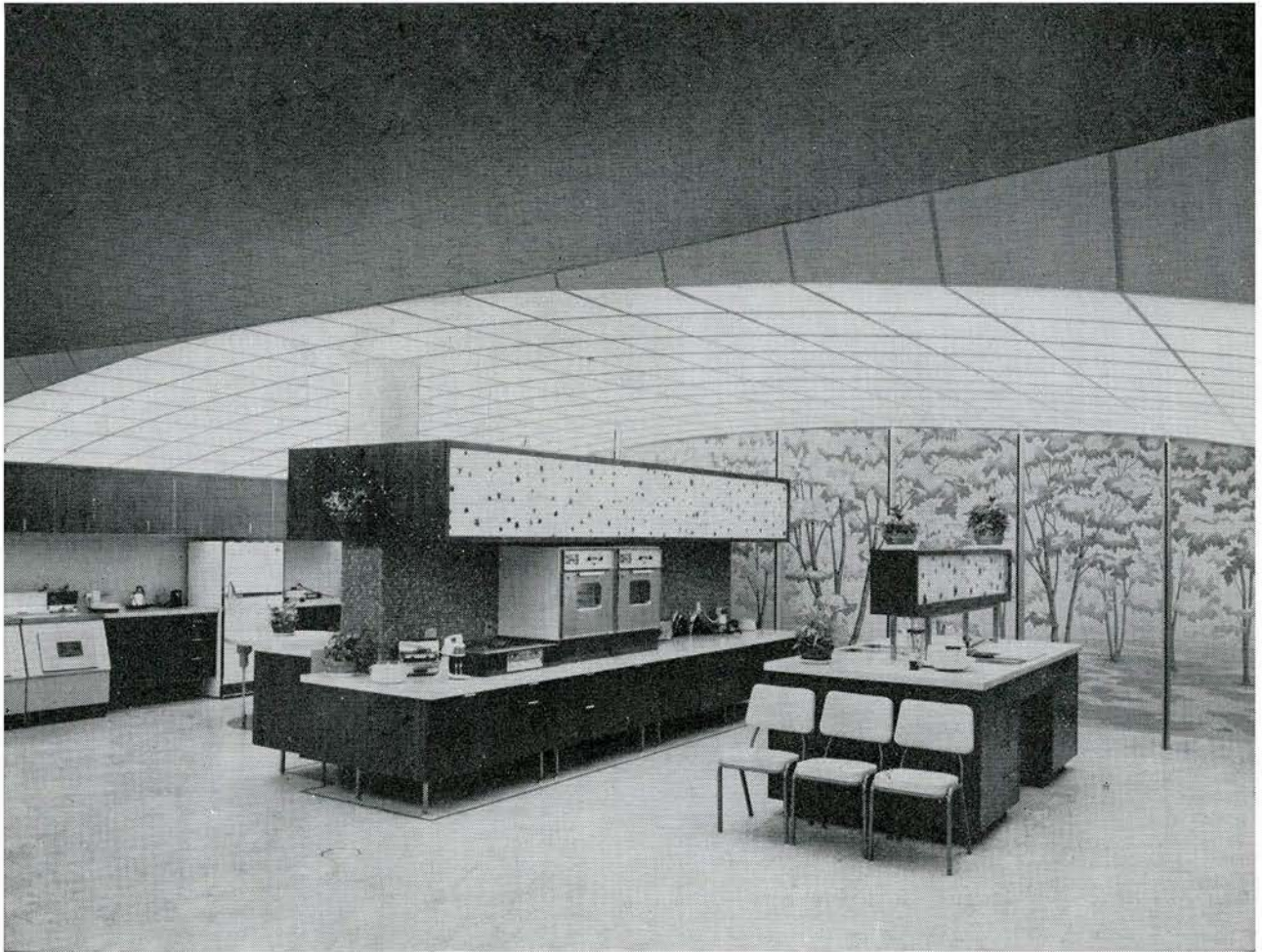
We specialize in industrial, commercial and institutional construction and have a staff of civil and mechanical engineers to supervise this work. When your building plans are marked "rush with care" consult Eastern. We build throughout Southern Ontario.



EASTERN CONSTRUCTION
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WINDSOR



Interior of Public Utilities Commission Building, London, Ontario, where Wilson Circlgrid is installed. Architect: H. L. Hicks.

*Here is new beauty, new efficiency
for illuminated ceilings*

WILSON CIRCLGRID

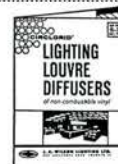
Circlgrid... the new non-burning vinyl louvre, another Wilson contribution to comfortable lighting.

Each Circlgrid panel consists of a pair of vacuum-formed, non-combustible sheets of rigid vinyl electronically welded for great structural strength and light weight.

- * Nominal sizes: 2' by 2', 2' by 4'.
- * Has 45° x 45° shielding.
- * Easily installed in most suspended acoustical ceiling systems.
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- * Light weight—only 3½ ozs./sq. ft.
- * Low brightness.
- * Circular openings promote air circulation.
- * Panels are rigid: easily cut to fit irregular areas.
- * Available in several transparencies.

A product of "Engineered Seeing"®

"Engineered Seeing" is identified by the Wilson "W" and symbolizes a company of illumination engineers and experts serving Canadian industry for fifty years.



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catalogue section today.



J. A. WILSON LIGHTING LTD.

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Plants: Toronto, Ont., Medicine Hat, Alberta. District Offices: Montreal, Toronto, Winnipeg

Agents: Eric Ackland & Associates Limited, Vancouver, Edmonton, Calgary.

These are the chairs □ That are part of the room that Royal built!



This is the planter □ That adds to the chairs □ That are part of the room that Royal built!



This is the table □ That fits the corner □ That joins the planter □ That adds to the chairs □ That are part of the room that Royal built!



These are the ottomans trim and neat □ That feature a moulded foam-rubber seat, □ That fix to the table □ That fits the corner □ That joins the planter □ That adds to the chairs □ That are part of the room that Royal built!



This is the Royal Viscount line □ That saves you space by unique design □ That comes in colours that make rooms glow □ That beautify tables sleek and low □ That match the ottomans trim and neat □ That feature a moulded foam-rubber seat □ That fix to the table □ That fits the corner □ That joins the planter □ That adds to the chairs □ That make up the room that Royal built!



this is the furniture *Royal* built!

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... for illustrated brochure and the address of your local Royal Dealer

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ACOUSTI-CELOTEX

CELOTONE

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ACOUSTI-CELOTEX sound conditioning products offer the widest variety of materials, textures, patterns and colour values to satisfy any acoustical or decorative need.

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Dominion Sound Equipments Limited is Canada's foremost Acoustical Applicator, with years of experience in this highly specialized field. Dominion Sound Equipments Limited is ready to serve you.



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Eliasoph & Berkowitz, Montreal, P.Q.

General Contractors:

David Bloom & Co. Inc., Montreal, P.Q.

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—NESLO CLIP-GRIP partition systems. WHITE movable UNIT PANEL walls.

**TRANSLUCENT
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—of LUMICEL and ACOUSTI-LUX which assure low brightness and uniform diffusion with high illumination levels.

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EQUIPMENTS LIMITED HEAD OFFICE: 4040 St. Catherine Street West, Montreal.

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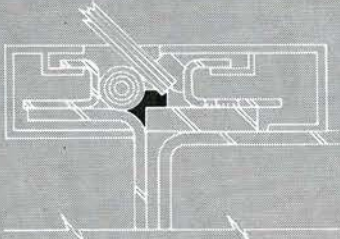


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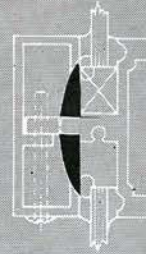
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BLUE CROSS BUILDING, Boston, Mass.



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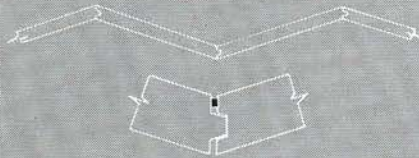
THE EQUITABLE
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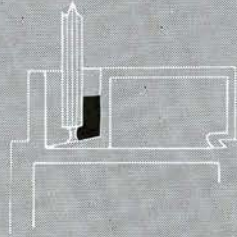
PROVEN TREMCO 1-PART 100% LIQUID POLYMER SEALANT

• FOR SEALING PANELS



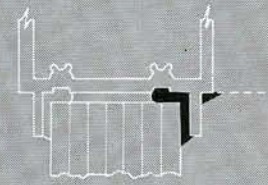
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WHITE PLAINS HIGH SCHOOL
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TREMCO MONO-LASTO-MERIC®, 1-PART 100% LIQUID POLYMER, ACRYLIC BASE SEALANT . . .

FEATURES

- A factory-mixed 100% liquid polymer sealant — ready for use
- Eliminates hazards and high cost of job site mixing
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factory mixed, ready for use in cartridge or bulk, assures absolute weathertightness for controlled joints, expansion joints and conventional caulking joints. It has a basic superiority over conventional sealants which require the use of ingredients that will migrate or oxidize in time, thus lowering sealant life and efficiency. Mono-Lasto-Meric is formulated with Tremco developed and Tremco manufactured pure 100% liquid polymer. The desired requirements of exceptional adhesion and enduring elasticity are *inherent* and *permanent* parts of the basic polymer. Absolutely non-staining on masonry surfaces.

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"When you specify a Tremco Product
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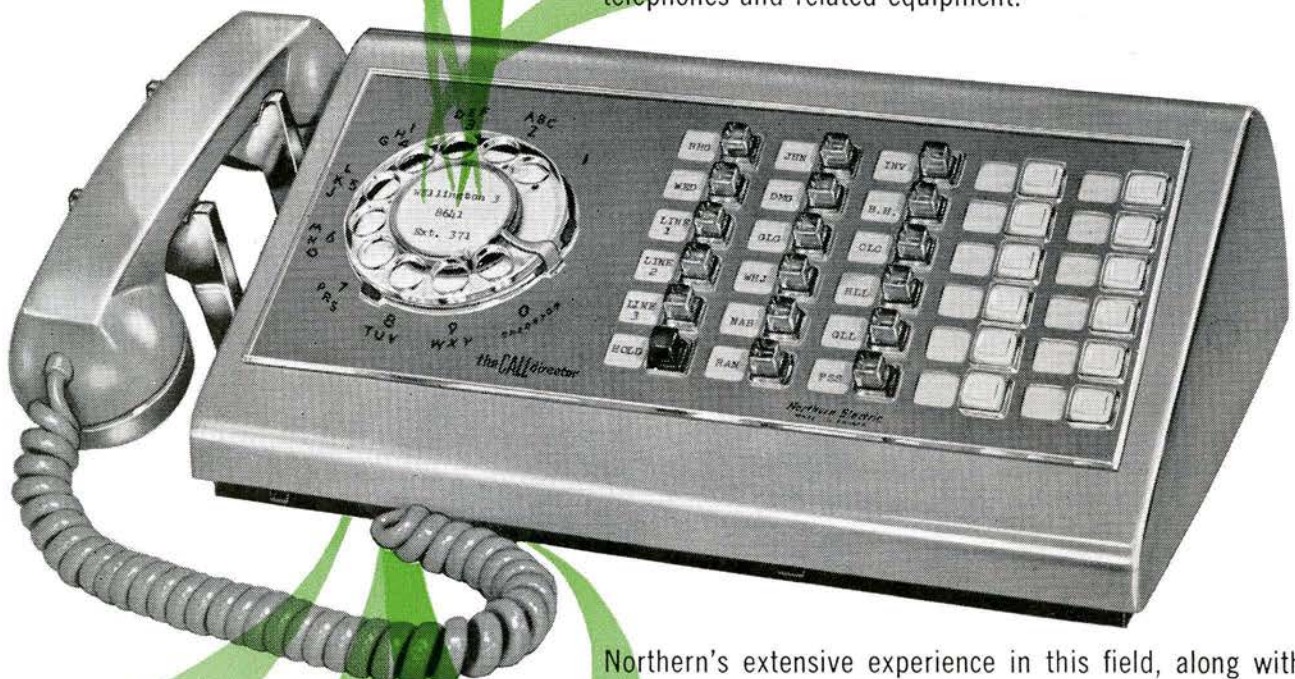
the **CALL** director



The 30-button CALL director helps secretaries handle more calls, streamlines office operation.

From Northern Electric comes a new-style genie . . . the CALL director telephone. It's the versatile virtuoso of modern business communications. To reach many inter-office extensions—just press a button. To hold a telephone conference—just press a button. To connect outside calls to others—just press a button. The CALL director is available with 12, 18 or 30 buttons and many features to save precious business time.

The CALL director telephone is another step forward in the science of business communications by Northern Electric, who design and manufacture most of Canada's telephones and related equipment.

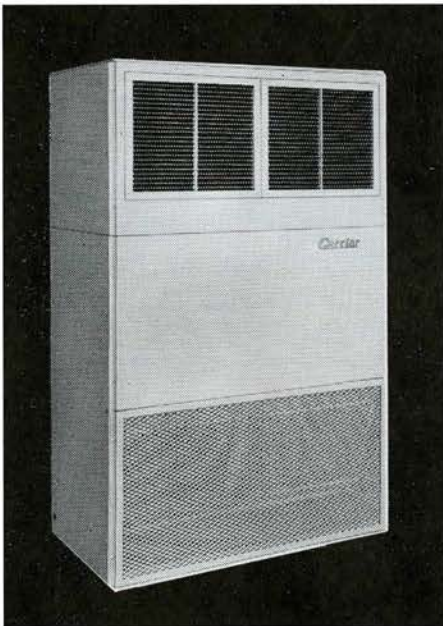


Northern's extensive experience in this field, along with their creative engineering and design personnel and modern manufacturing facilities are at your command. Branches are strategically located across Canada to serve you.

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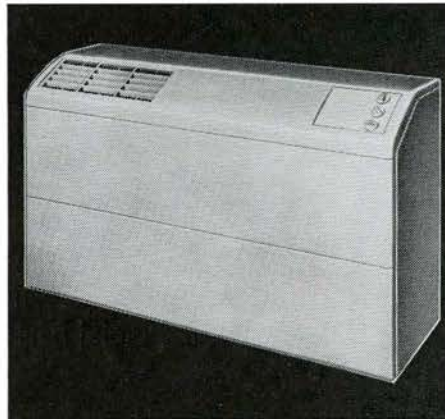
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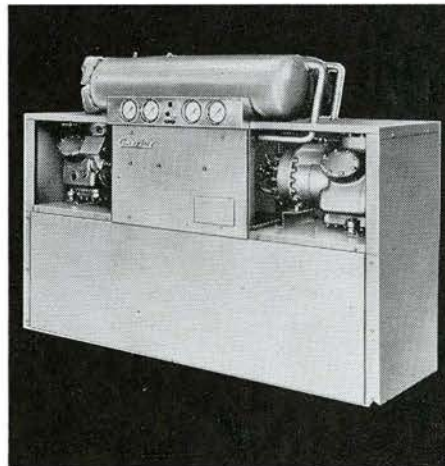
38R Fan and Coil Weathermakers

A complete family of fan and coil units in nine sizes from 5 to 50 tons—available both in direct expansion and water chilled models. Highly versatile, the variety of fan arrangements allows a wide range of flexibility. In many instances, this permits installations impossible with other units. These Weathermakers satisfy the trend in commercial air conditioning for versatility and space conservation, as well as for attractive appearance.



51 Series Weathermakers

For new and existing buildings, these versatile units provide the benefits of a central air conditioning system at a fraction of the cost. An across-the-sill model is available, which ties in with central system heating through existing steam or hot water lines—or uses built-in electric resistance heat—to provide efficient and economical year-round heating and cooling. Neither unit requires remodeling or ductwork.



30HH and HJ Liquid Chilling Packages

The most compact completely packaged liquid chillers ever offered. Available in 15, 20, 25 and 30 ton models, these units represent a substantial saving to your clients in floor space as well as efficient performance. Quiet in operation, this complete Carrier refrigeration system is designed to chill water for air conditioning or industrial process cooling applications. Available with or without condensers.

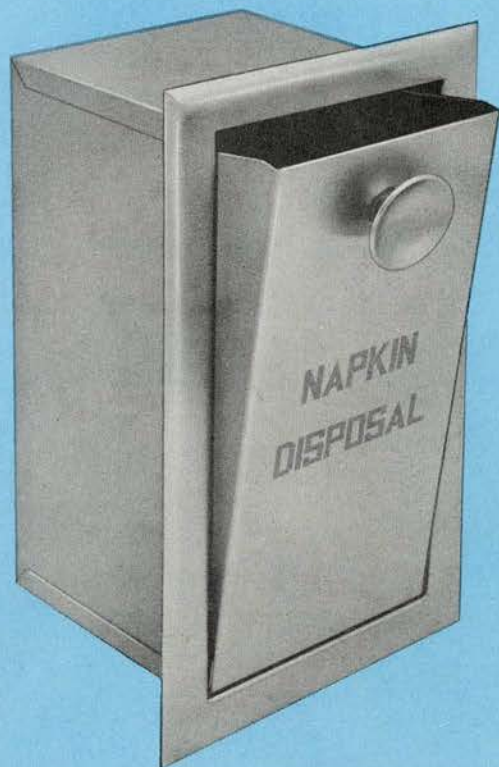
For complete details about these new developments, see the Carrier dealer listed in the Yellow Pages. Or write to Carrier Air Conditioning (Canada) Limited, 70 Queen Elizabeth Boulevard, Toronto. Offices and dealers in principal cities.

BETTER AIR CONDITIONING FOR EVERYBODY

EVERYWHERE



GH Wood's RECESSED SANITARY NAPKIN DISPOSAL WALL BINS

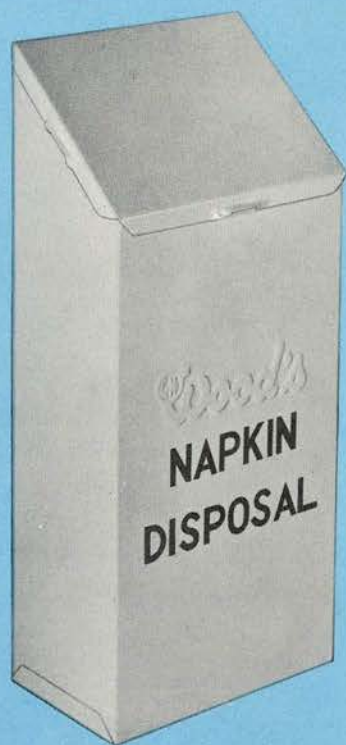


ND No. 6 **RECESSED WALL BIN**

Convenient wall-recessed sanitary napkin bin. Exposed surfaces and removable container of stainless steel. Bin has built-in receptacle for deodorant block.



GH Wood's WALL MOUNTED SANITARY NAPKIN DISPOSAL BINS



ND No. 4 **WALL MOUNTED BIN**

Compact wall mounted sanitary napkin disposal bin.

Holds standard 6 lb. paper bag. Bin has built-in receptacle for deodorant block.

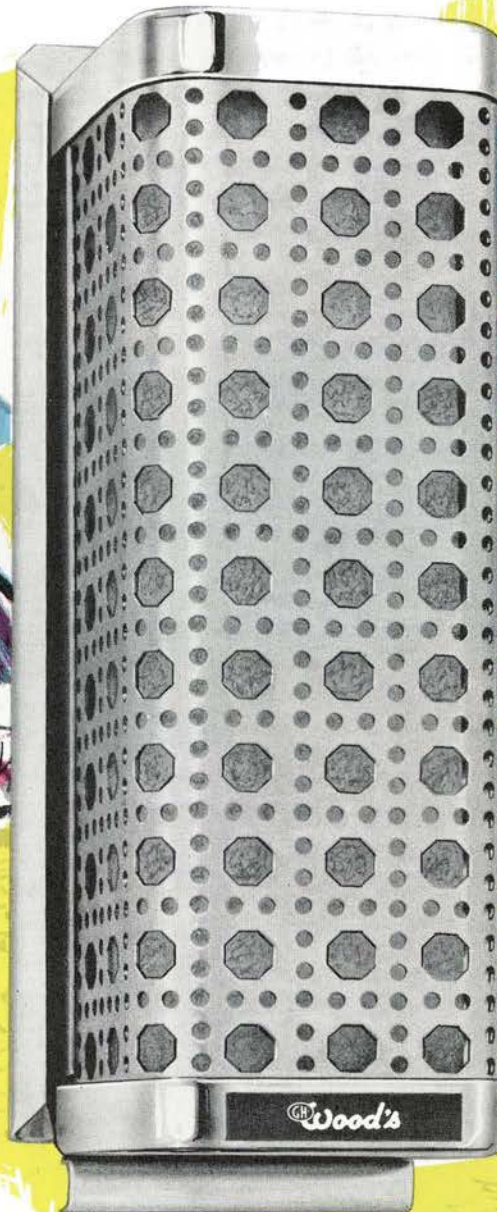
Finished in baked white enamel.

"Sanitation for the Nation"

G. H. WOOD & COMPANY, LIMITED
TORONTO • MONTREAL • VANCOUVER
BRANCHES ACROSS CANADA

Freshen Up Your Washrooms...

With These Fragrant Deodorizers



ORIENTAL BOUQUET

A double strength medley of exotic fragrance—pleasant and effective.

CEDAR PINE

The tangy refreshing aroma of an outdoor morning.

GARDENIA

A garden fresh floral fragrance.

Dimensions—8 $\frac{3}{8}$ " Height, 3" Width, 2 $\frac{1}{2}$ " Depth

Yes, all washrooms do need constant air correction. That's why thousands of businesses, hotels, schools and hospitals specify and use these registered deodorizers.

We guarantee satisfaction for just a few cents a day. Test installations will be made without cost or obligation.

"Sanitation for the Nation"

G. H. WOOD & COMPANY, LIMITED
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proudly announce the recent acquisition of two famous names in floor coverings. Complementing our well-established lines of BP Vinyl-Asbestos and Asphalt Flortiles, we are now producing at Hamilton a broad assortment of Solid Vinyl and Rubber Flortiles developed by —

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Three famous brands — in the greatest assortment of colours and designs — are now available in a single family grouping and at one source of supply.



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ONE
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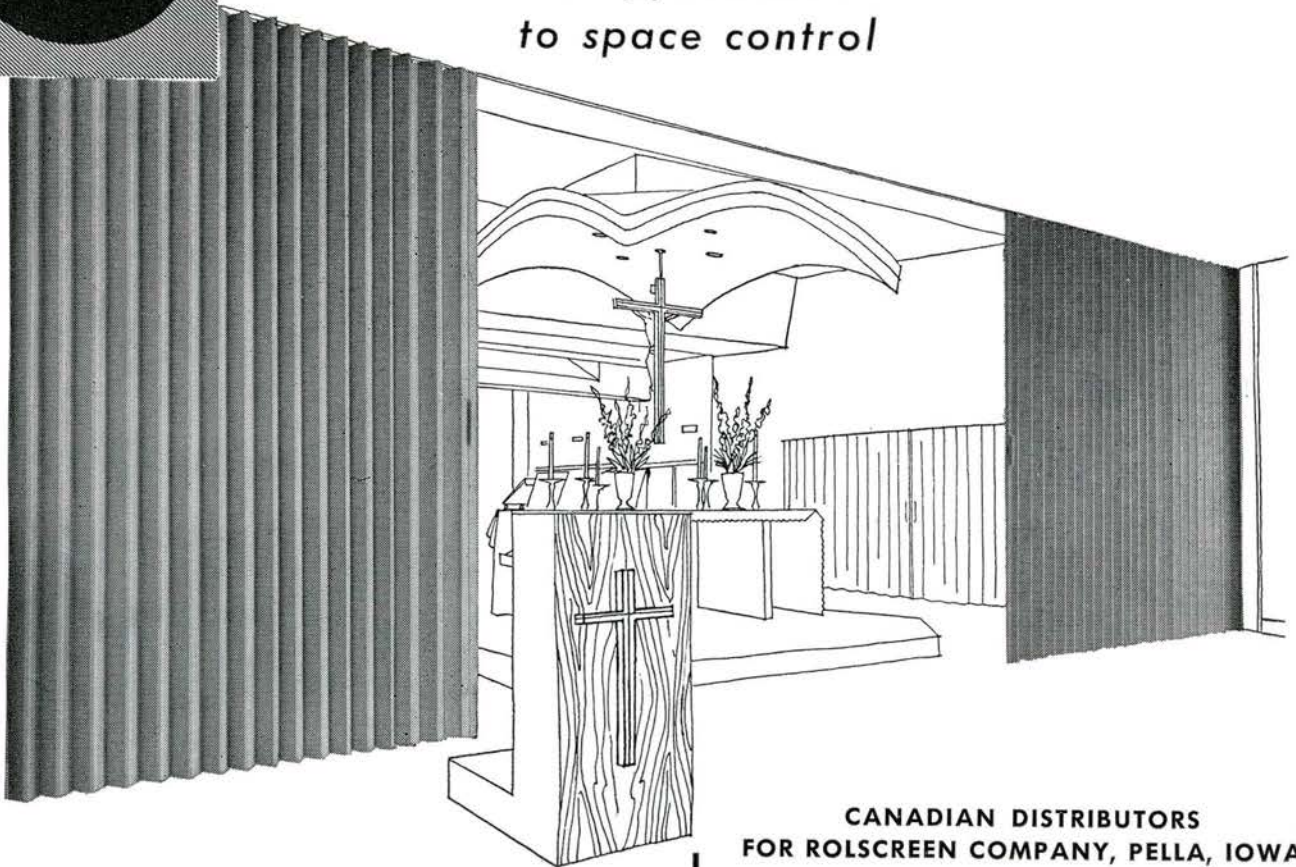
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ACME ENTRANCE DOORS in standard and custom sizes with choice of hardware and door controls.

ACME SLIDING DOORS designed by Arcadia to provide genuine Arcadia quality, competi-

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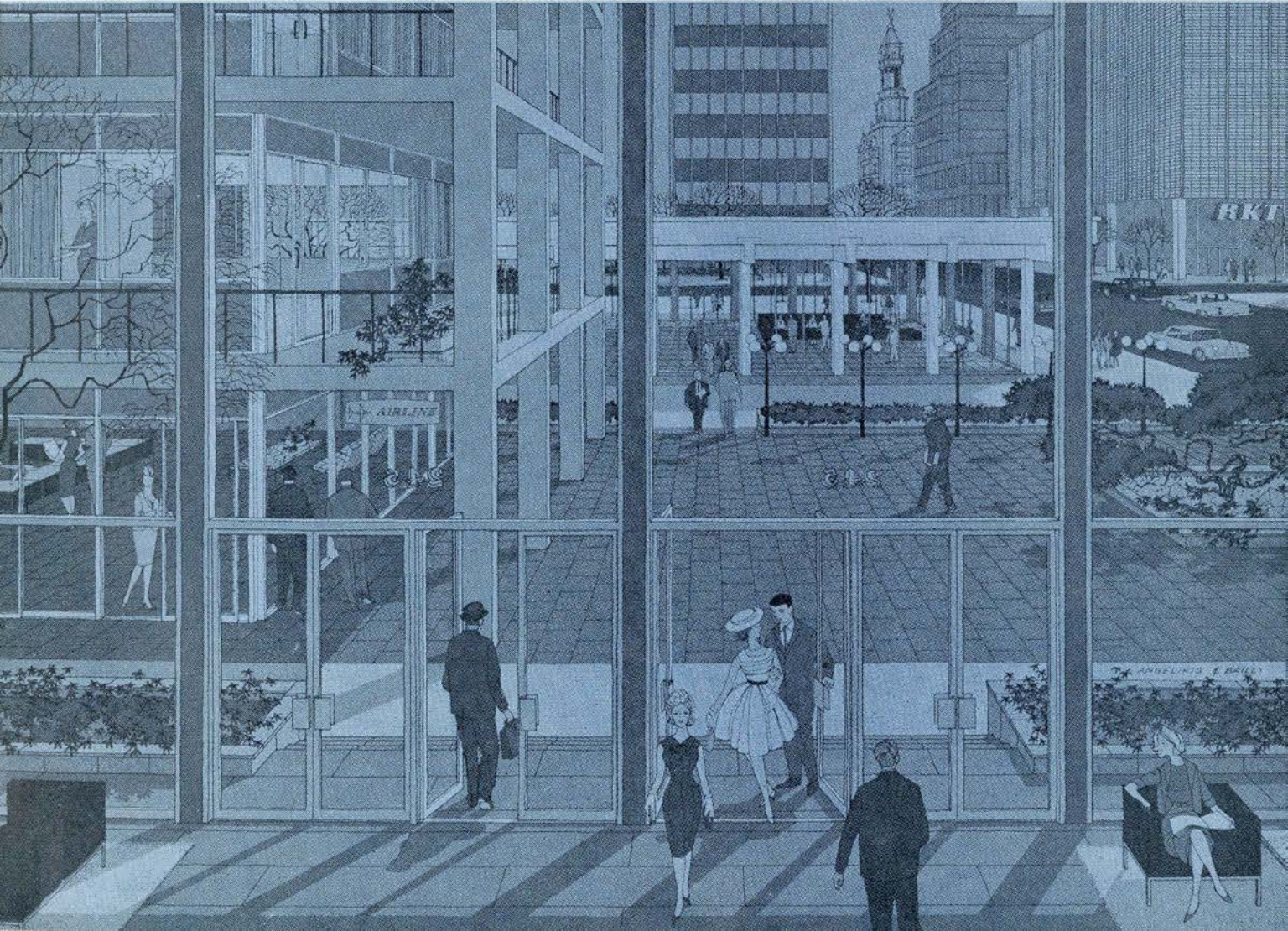
ARCADIA SLIDING WINDOWS in two series of superior aluminum architectural windows in stock and custom sizes.

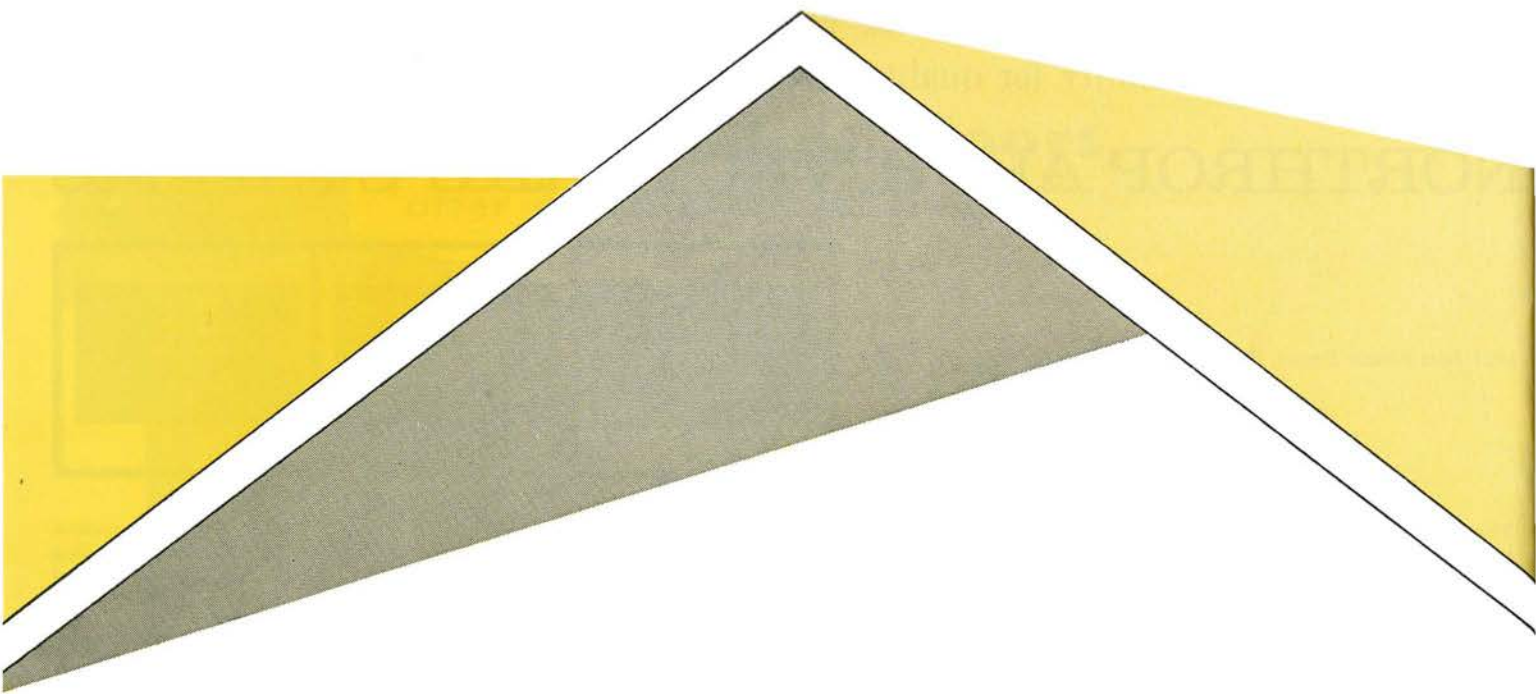
ARCADIA WINDOW-WALL SYSTEMS soon to be available in two integrated, all-aluminum systems of factory-fabricated framing components.

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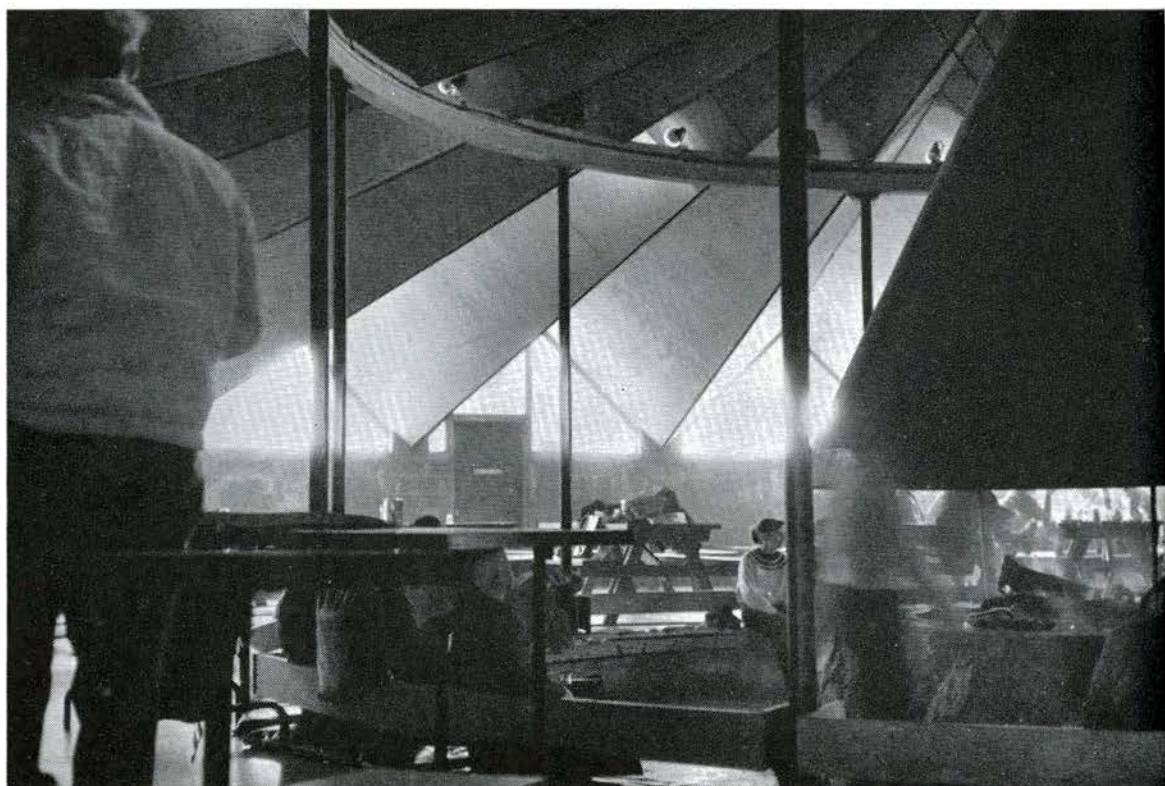
PAC/WALL CURTAINWALL in standard and custom systems in steel and aluminum. Pac/Wall products are engineered and manufactured by Pacific Curtainwall Inc., a separate subsidiary of Northrop Corporation.

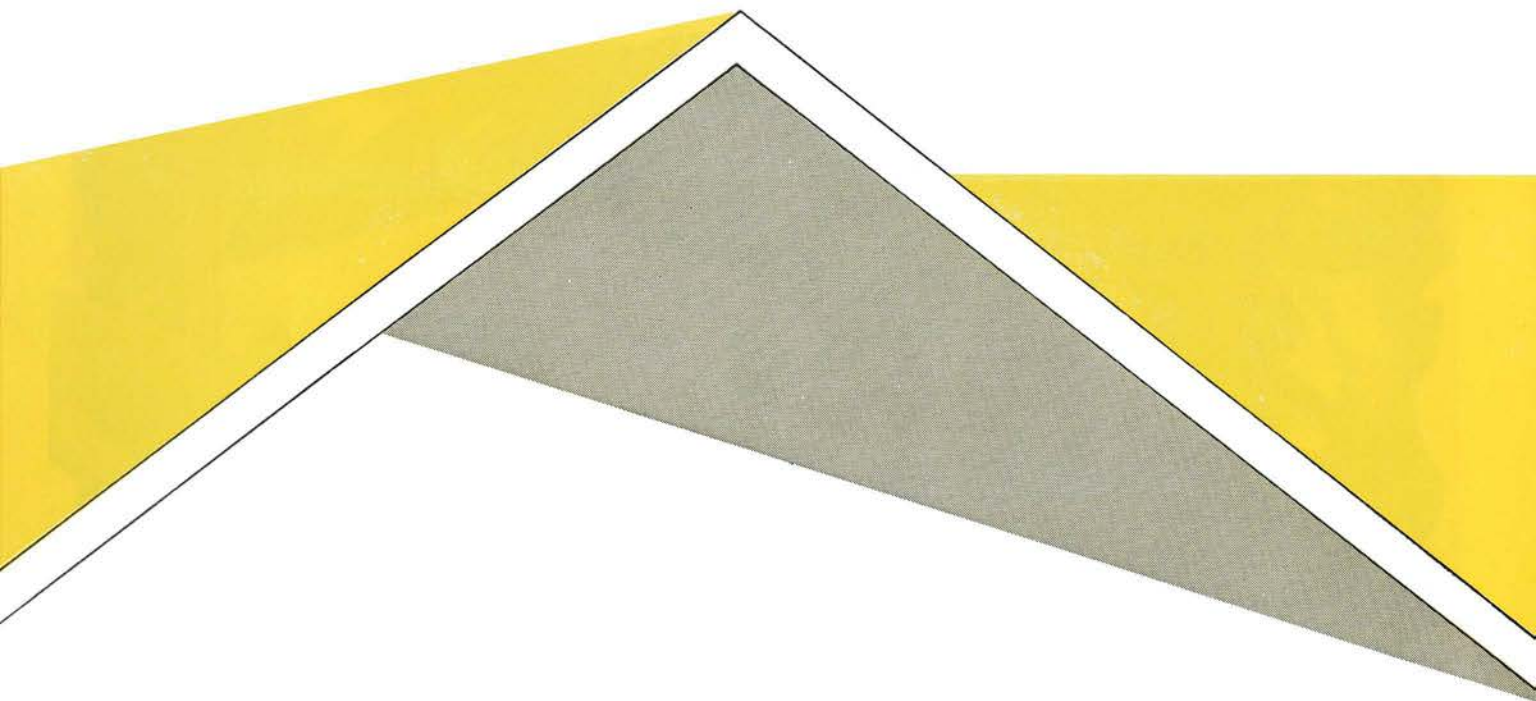
Soon your Acme, Arcadia or Pac/Wall representative will be bringing more news about Northrop Architectural Systems – its plans and its products to build the face of a city.





A SKI LODGE 'CAROUSEL' OF





FIR PLYWOOD FOLDED PLATES

When designing and building the Edelweiss Ski Lodge, Wakefield, Quebec, the main considerations for Mr. Bill Teron of Teron Construction Co. Ltd., Ottawa, were permanent strength and weather-proofing for such an exposed building. Secondly, he wanted it to have a suitably rugged, high-spirited exterior and an inside atmosphere of light-hearted recreation. Also, the roof components had to be prefabricated, and light enough for manhandling because no cranes were available on the mountainside.

"The use of Fir Plywood Folded Plates was the only way to meet all those requirements at low cost", said Mr. Teron.

The 48 Folded Plate sections are made of Fir Plywood panels nail-glued to lumber chords, forming a roof with a diameter of 80 feet. The outer bearing points are 10 feet apart round the wall where the web depth is almost 7 feet. At the centre the webs are 2 feet deep and connected to a ring which is supported by pipe columns. By December 1960, only three months after taking the decision to build, the lodge was in use and winning wide popularity. The actual construction took less than four weeks.

The Folded Plates, covering area as well as spanning distance, are another Fir Plywood structural component with wide scope for every designer who appreciates its practical and aesthetic advantages. The Plywood Manufacturers Association and its fieldmen across Canada are ready to help you make use of these new ideas.

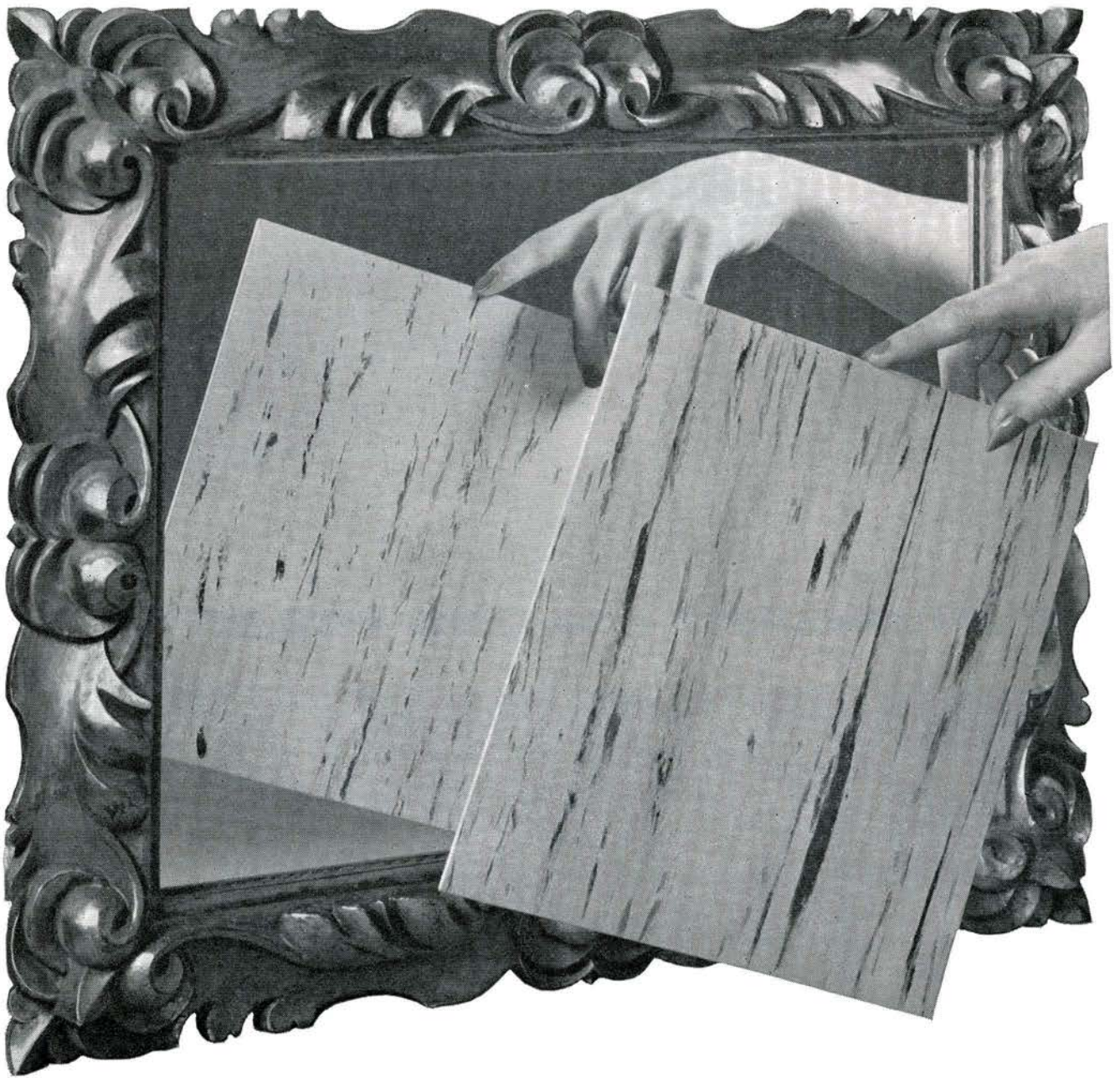
S-61-3



WATERPROOF GLUE FIR PLYWOOD

PLYWOOD MARKED **PMBC EXTERIOR** HAS WATERPROOF GLUE
Plywood Manufacturers Association of B.C., 550 Burrard Street, Vancouver 1, B.C.
Field Offices: Vancouver, Calgary, Winnipeg, London, Ottawa, Toronto, Montreal



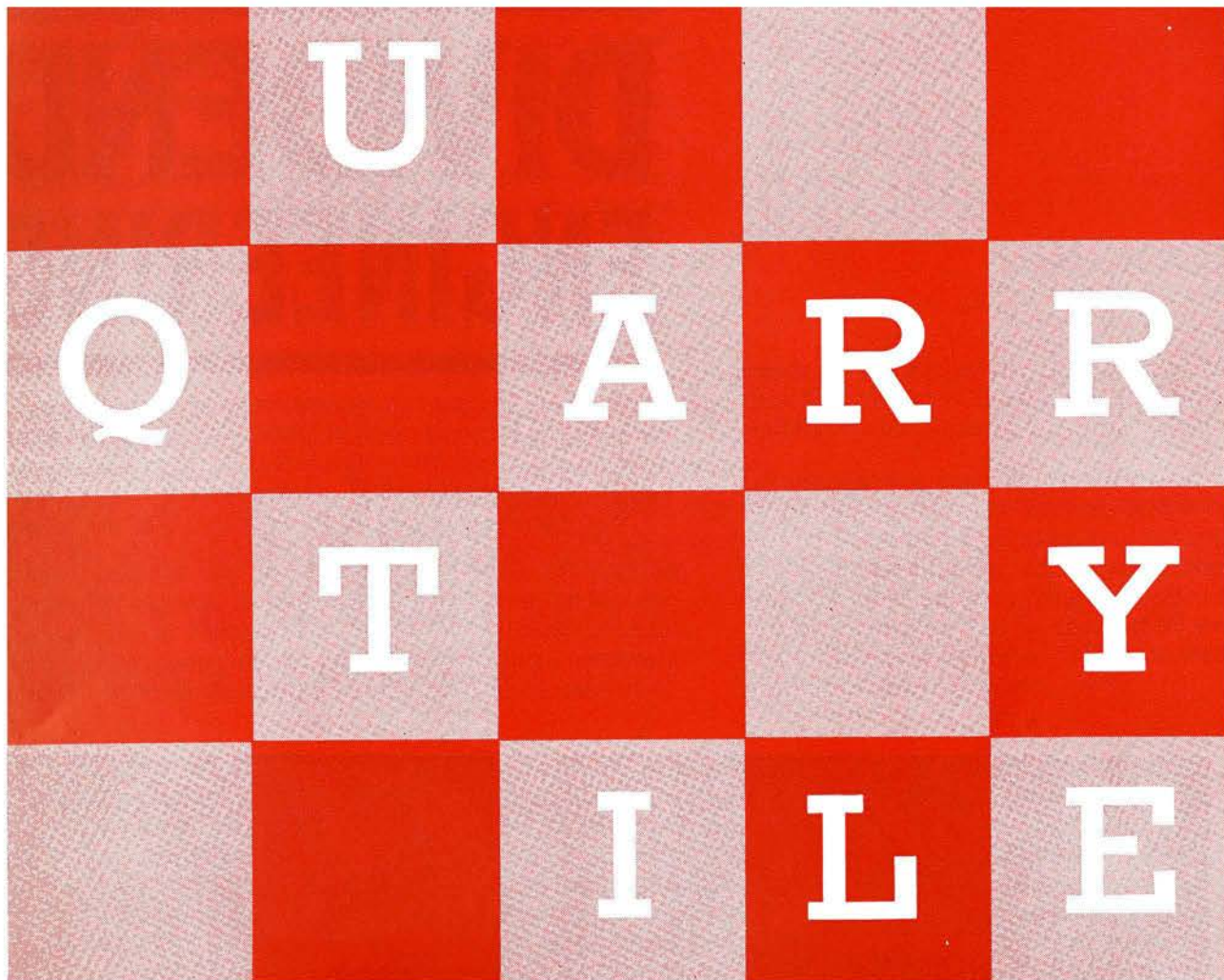


BEAUTY IN DEPTH with front-to-back patterns of Dominion Vinyl Tile "Catalogne",

an **exclusive** Dominion pattern developed from an early-Canadian rug design, is the most "**different**" pattern in the vinyl asbestos field, yet it is decoratively correct for any floor and is suitable for both home and industrial use. Much of this pattern's beauty is in the clarity of its colours, which go **all the way through**. "Catalogne", is C.H.M.C.-approved for all grades and is available in 9" x 9" tiles which can be used with special strips, borders and spot pieces for interesting effects. It is stocked in .080 gauge and 1/8" gauge is available to order. Naturally, being a vinyl **asbestos** tile, "Catalogne" is reasonably priced. Write to address below for full information and literature.

FLOORS BY DOMINION

Dominion Oilcloth & Linoleum Co. Limited, 2200 St. Catherine St. East, Montreal. Makers of Dominion Linoleum, Vinyl Tile, Asphalt Tile, and Associated Products.



SA-4

**where
 permanence
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The Greeks and Romans specified Quarry Tile that's still in fine condition.

Today, Cooksville-Laprairie Brick Limited makes the finest burned clay Quarry Tile and Acid-Resisting Floor Brick available.

Specify CLB Quarry Tile and

Acid-Resisting Floor Brick where heavy traffic and corrosion are problems. CLB Quarry Tile is available in four earthy colours;

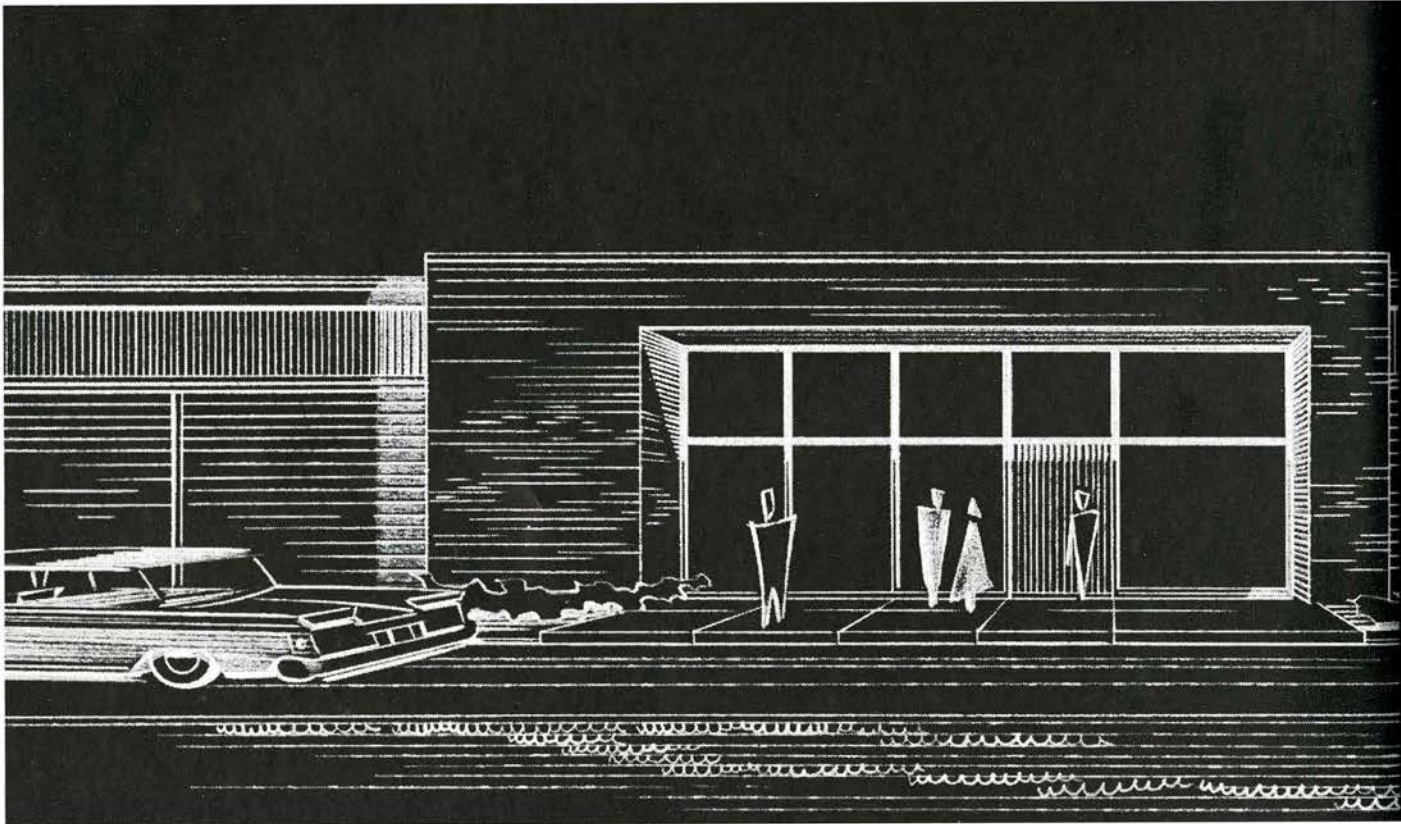
Lorraine Red, Golden Buff, Chocolate Brown, Enduro Gray. Write for descriptive literature and specifications.



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Dividend Engineering is a service developed by Fiberglas specifically for architects and engineers. It is a new, quick method of pinpointing insulation specifications that can project significant savings in initial and operating costs at the planning stage.

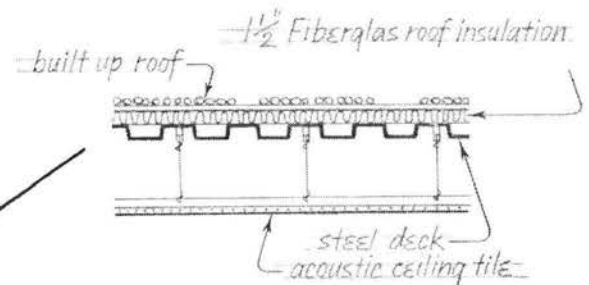
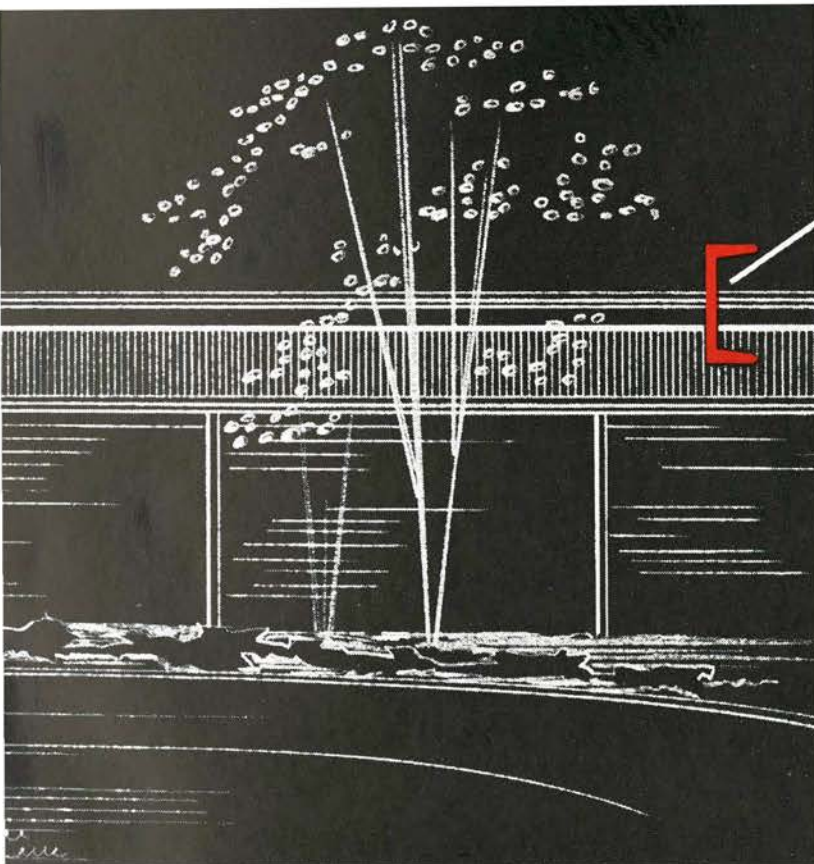
The example shown here illustrates how this system works. Original specifications called for one inch fiberboard roof insulation. A Dividend Engineering analysis forecast that by using one and one-half inch of Fiberglas roof insulation optimum heat savings would result. While the cost of this extra insulation amounted to \$4,000, the added efficiency made it possible to predict a \$12,000 saving on cooling equipment alone—for a net initial saving of \$8,000.

In addition, annual operating-cost savings of \$784 on power and water, \$700 on financing, \$316 on depreciation and insurance totalled \$1,800. Without a Dividend Engineering evaluation to point out the optimum "thermo-economic" performance of the roof, this \$1,800 would be wasted every year.

Similar analyses and comparisons can reflect comparable savings for any wall or roof construction—even for window shading fabrics. Fiberglas Canada Limited, using an estimating system based on thermo-economic data accumulated over 20 years in thousands of industrial and commercial

buildings, can supply complete and accurate data in a matter of hours from information supplied by the engineer on a simple form.

Let us show you how Dividend Engineering, by forecasting valuable savings, makes the comfort benefits of efficient heating and year-round air conditioning an economic possibility for more and more industrial and commercial structures. Get in touch with your local Fiberglas representative or write Fiberglas Canada Limited.



**DIVIDEND ENGINEERING
DOLLAR-SAVING PROPOSAL**

*Cost of Heating
& Cooling Equipment*

Original Specifications	\$32,000
Dividend Engineering Specifications	20,000
Predicted Saving	\$12,000
Additional Insulation Cost (in place)	4,000
Net Initial Saving	\$ 8,000

*Projected Annual
Operating Costs*

Original Specifications	\$ 9,947
Dividend Engineering Specifications	8,147
Annual Saving	\$ 1,800



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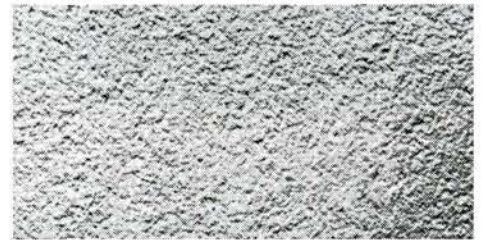
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*T.M. Reg. in Canada



This beautiful AUDICOTE ceiling quiets Temple Emanuel in Montreal. (left) *Architects:* Greenspoon, Freedlander & Dunne; Max W. Roth. *General Contractor:* J. Serrentino. *Plastering Contractor:* Antonio Archambault & Co., Ltd.



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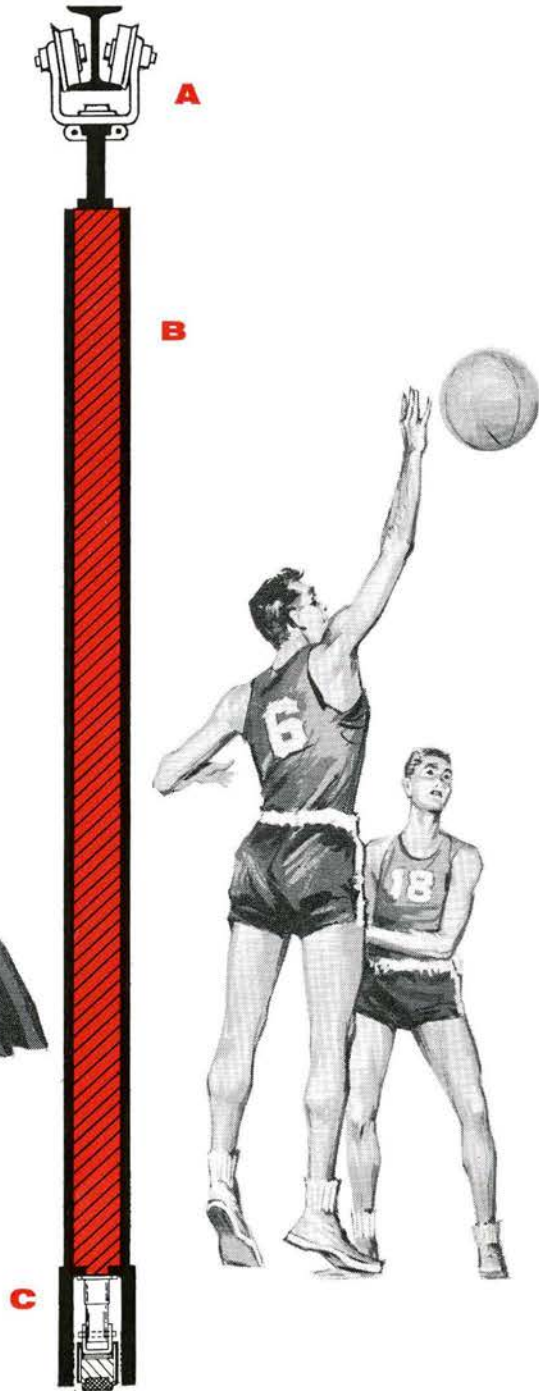
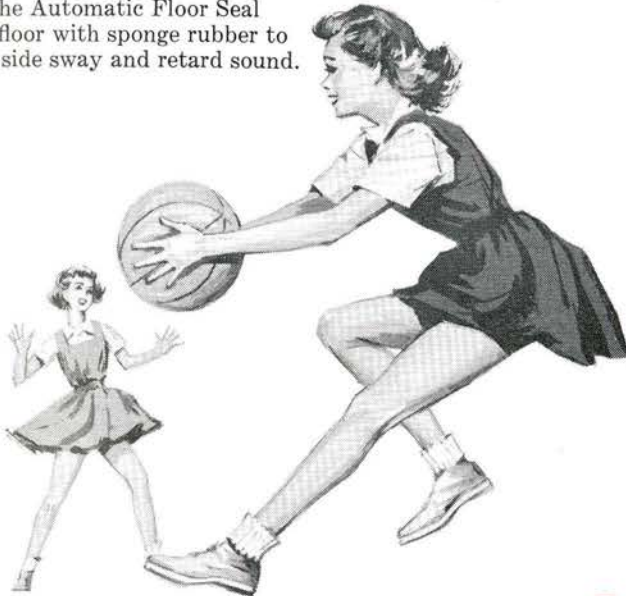
Certainly a wonderful asset—especially when the partition is built to withstand the punishment of active young people and designed to blend with the handsome appearance of modern schools.

For detailed specifications covering the Brunswick range of gymnasium equipment, write or contact the address shown below.

A Brunswick's "Y" yoke trolleys, which operate on an "I" beam track, provide feather-light, friction-free movement.

B Structurally proven Brunswick hardboard honeycomb 'AeroCore' panelling (cells of resin-impregnated paper) provides maximum stability, extra sound insulation, and is warpage-free even under extreme conditions.

C When the Brunswick Folding Partition is locked into position the Automatic Floor Seal grips the floor with sponge rubber to eliminate side sway and retard sound.



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6 advantages of

Armstrong Corlon

SHEET VINYL floors in hospitals

The exacting maintenance requirements of hospitals pose special problems to be considered when making flooring specifications. Hospital floors in rooms and corridors are bound to be subjected to frequent, rigorous cleaning. Often this entails harsh compounds. It is important that "dirt-traps"—cracks or crevices where germs or viruses might accumulate—are eliminated as far as possible. Because sheet floors provide a virtually seamfree, smooth surface that is easy to clean, they are generally considered by hospital planners and maintenance experts to be the most suitable for hospital use. Of course in certain specialized areas—X-ray rooms or operating rooms for example—other flooring materials may be required. However, such requirements involve technical considerations beyond the scope of this article.

Sheet floors have minimum number of dirt-catching seams

Because linoleum and sheet vinyl floors come in rolls 6' wide and up to 100' long, they can be installed with a minimum number of seams. If, for example, a 48' x 60' area were covered with 9" x 9" tiles, there would be more than a mile (5,760 feet) of seams. Even with 2" stripwood flooring, there would be a minimum of 1,450 feet of floor board joints. On the other hand, six-foot sheet flooring could be installed with only 300 feet of seams in our hypothetical 48' x 60' area.

And if required, completely seamfree, truly monolithic floors can be achieved with Armstrong Sheet Vinyl Corlon, because it is thermoplastic and the seams can be heat-sealed by experienced technicians.

Sheet floors can be coved up the wall to avoid further dirt traps

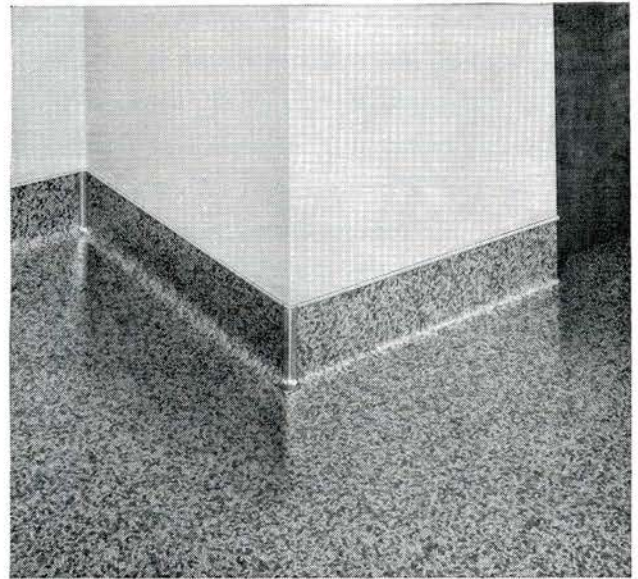
Sheet floors present another maintenance advantage for hospital use in that they can be coved—or "flushed"—up the wall in one continuous sheet. This completely eliminates baseboard crevices or the slight separation between top-set cove base and the floor. And coving sheet floors provides a smooth, flowing surface which avoids dirt traps and permits the lower wall surfaces to be cleaned in one continuous operation. (See photo).

Sheet floors stand up well under rigorous hospital cleaning

Because they are virtually seamfree, sheet floors can take really heavy cleaning and decontamination without being damaged by excessive amounts of water. They are not harmed by the detergents, soaps, and disinfectants generally used in hospital maintenance. And when emergency cleaning is called for to pick up strong or poisonous substances, wiping up is easy because nothing gets trapped in joints, crevices, or corners.

Maintenance costs reduced

In most cases, sheet floors require less time to clean thoroughly than tile or wood floors, so day-to-day main-



By coving sheet floors up the wall, dirt-catching crevices are eliminated and thorough cleaning is fast and simple.

tenance costs are likely to be reduced. And damaged areas of sheet floors can be repaired because it is a relatively inexpensive job to cut out a section encompassing the damaged area, remove it, and install new material in its place.

Sheet floors to fit any hospital budget

There is an Armstrong sheet floor to meet every cost and decorative requirement, because Armstrong is the one company that makes every basic type of sheet flooring material. A wide range of colours and designs are available in both vinyl and linoleum. A number of styles in Armstrong Sheet Vinyl Corlon are manufactured with the exclusive alkali- and moisture-resistant Hydrocord Back and can be installed in areas on and below grade as well as above grade.

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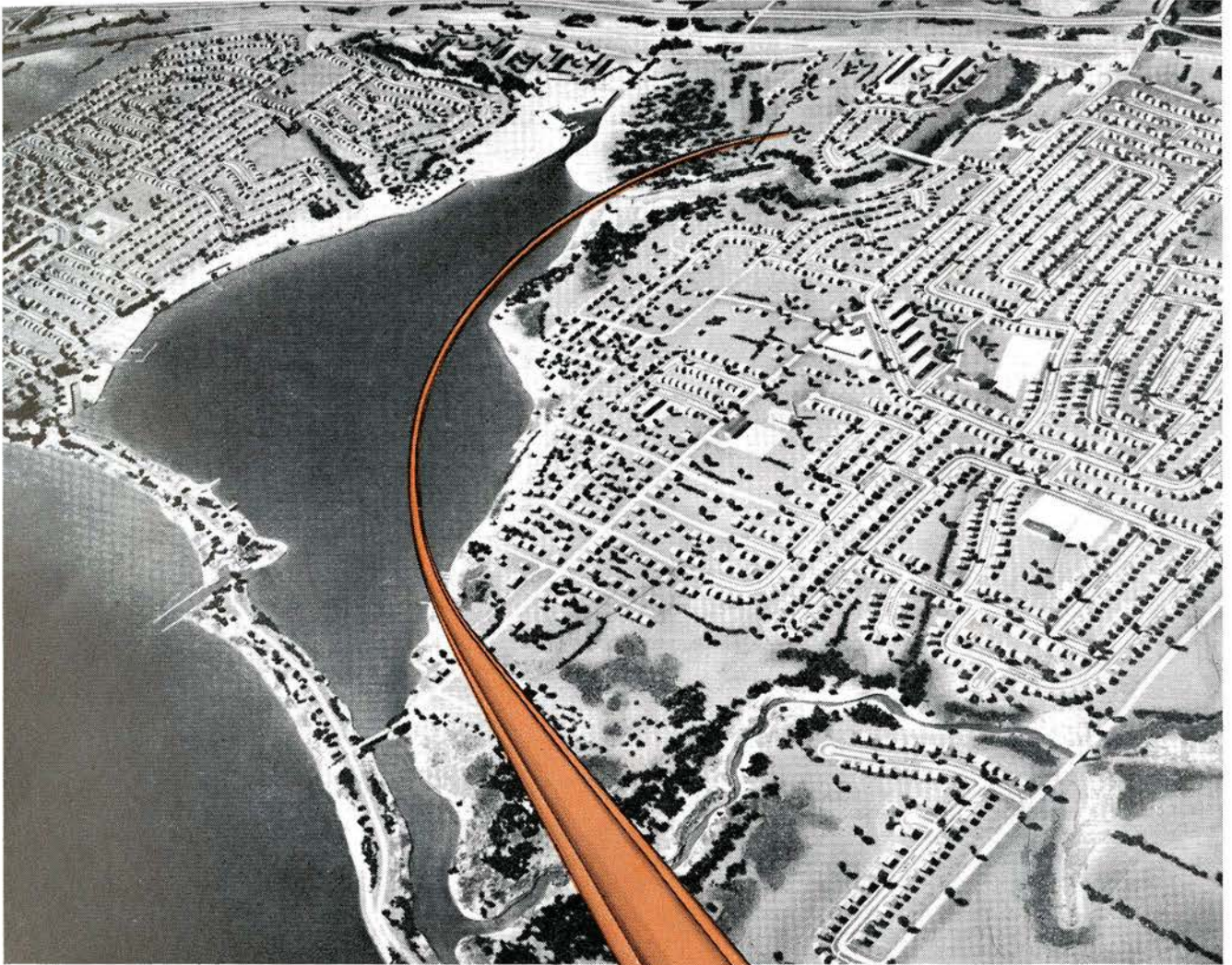
For complete specs and samples of all Armstrong sheet floors—or for anything to do with resilient floors—call your Armstrong District Office. Or if you wish, write direct to Armstrong Cork Canada Limited, P.O. Box 919, Montreal, P.Q.

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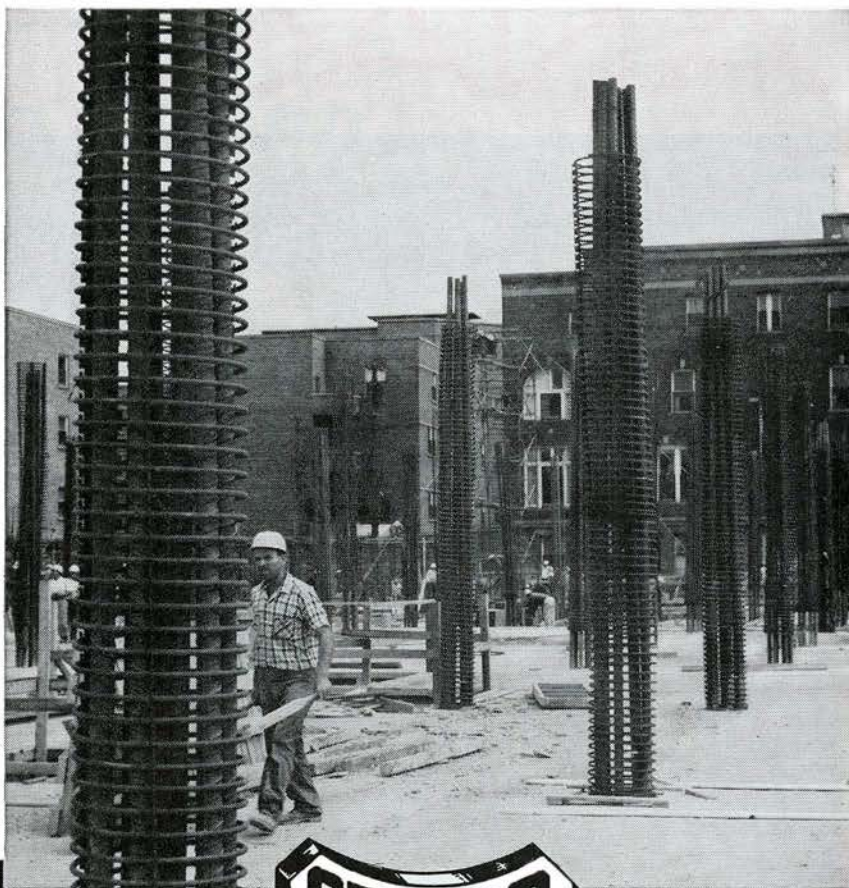
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St. Joseph's Hospital, Hamilton, Ontario.

OWNERS: The Sisters of St. Joseph, Hamilton.

ARCHITECTS: Prack & Prack, Hamilton.

GENERAL CONTRACTORS: Pigott Construction Company Ltd., Hamilton.

Continuous steel column reinforcement in the extension to St. Joseph's Hospital, Hamilton, Ontario, is provided by Stelco No. 18 (2" S.E.) Hi-Bond Bars welded end-to-end at two-storey intervals. Stelco also produces No. 14 (1½" S.E.) bars, which are equally well suited to this new technique.

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- With fewer column bars, the placing of beam bars is faster and easier.
- Good concrete coverage is maintained.
- Welding reduces erection time as compared with splicing. It also eliminates shop bending and bar overlaps.

Stelco Hi-Bond Reinforcing Bars are available in a complete range of sizes (¼" diameter, or No. 2 bar, up to 2" S.E., or No. 18 bar), conforming to C.S.A. Specifications G.30.1 and G.30.6-1954, and to A.S.T.M. Designation A.305-51. Full information, and details of on-site delivery service, are available from any Stelco Sales Office.



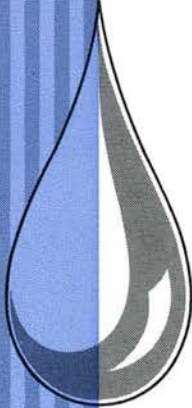
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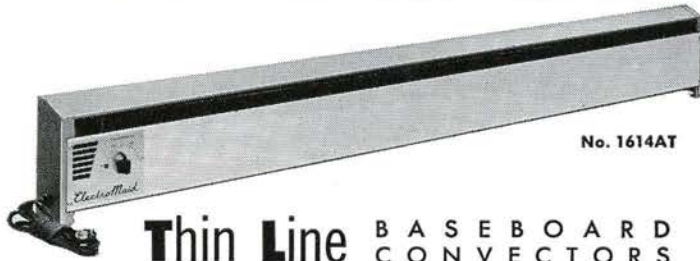
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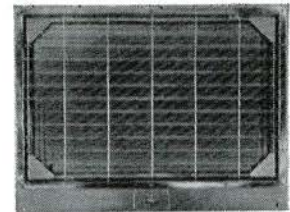
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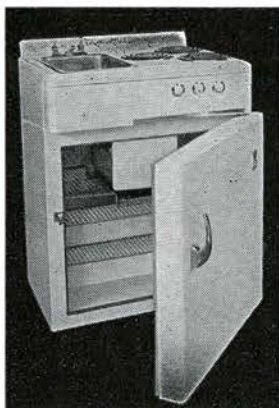
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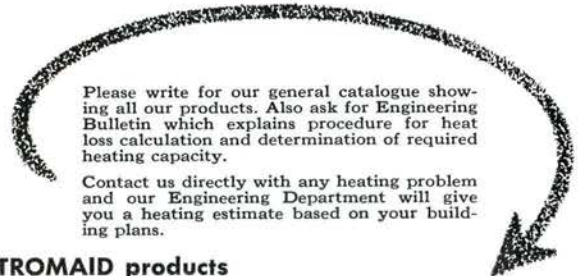
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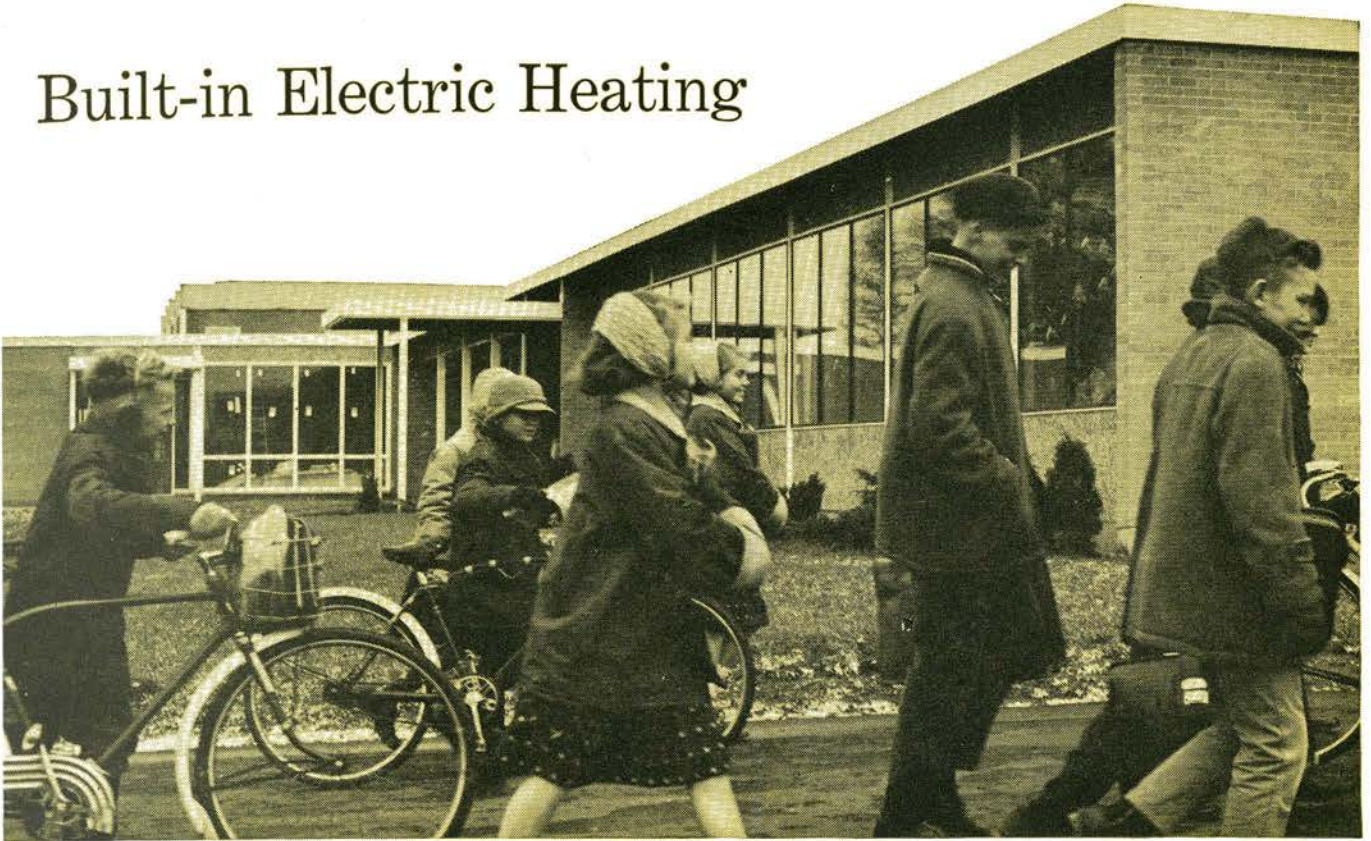
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With electric heating there is no complicated equipment taking up valuable space. Since there is no combustion, there is no dirt and no fumes. It provides a healthier climate for the pupils and maintenance costs are kept at a minimum.

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Architect E. H. Hagarty and Teacher R. Ayearst —inspect electric heating system. Because all electric installations could be handled by one contractor, costs were considerably reduced.





Effie and the Architect

She calls it "her building". After all, who cleans and keeps it looking new? He calls it "his building". After all, who created it?

Other than that, they get along famously. He likes her because she keeps his building as bright as the day it first opened. And she's got a crush on him because he specified stainless steel. It makes her job easier, her building brighter, and her boss happier.

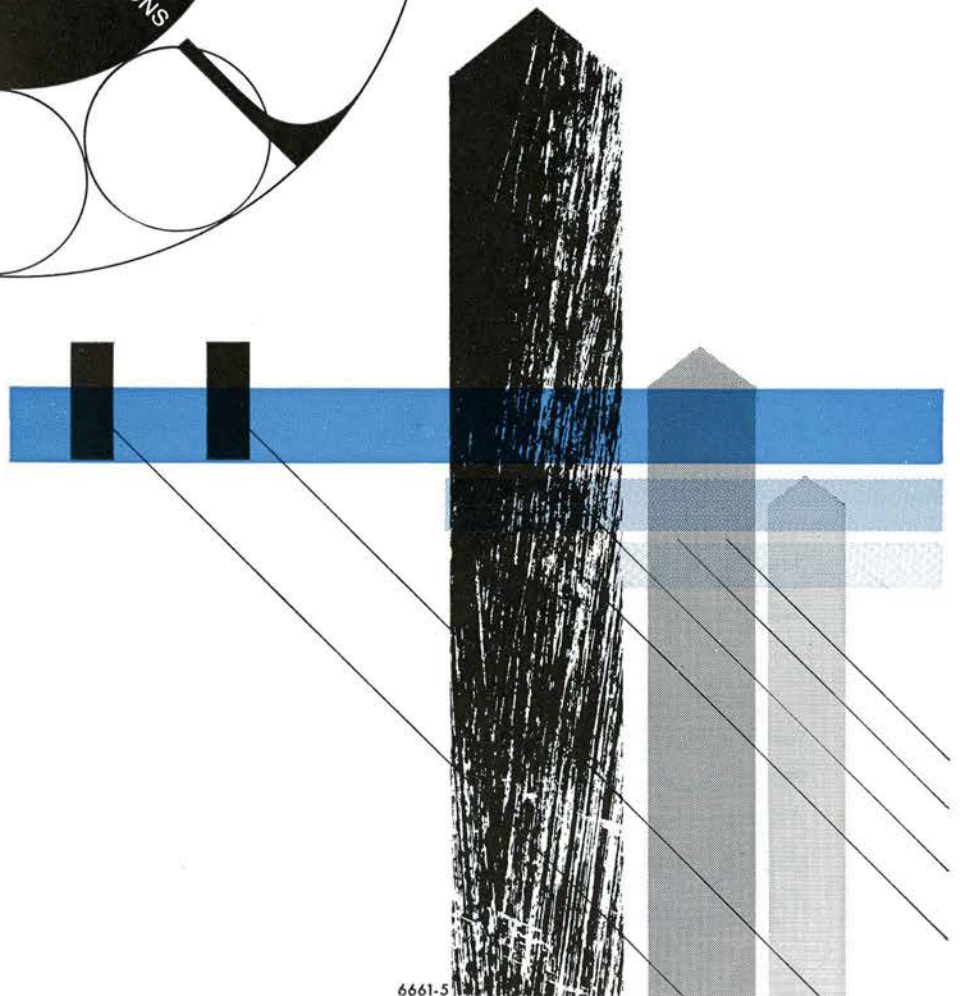
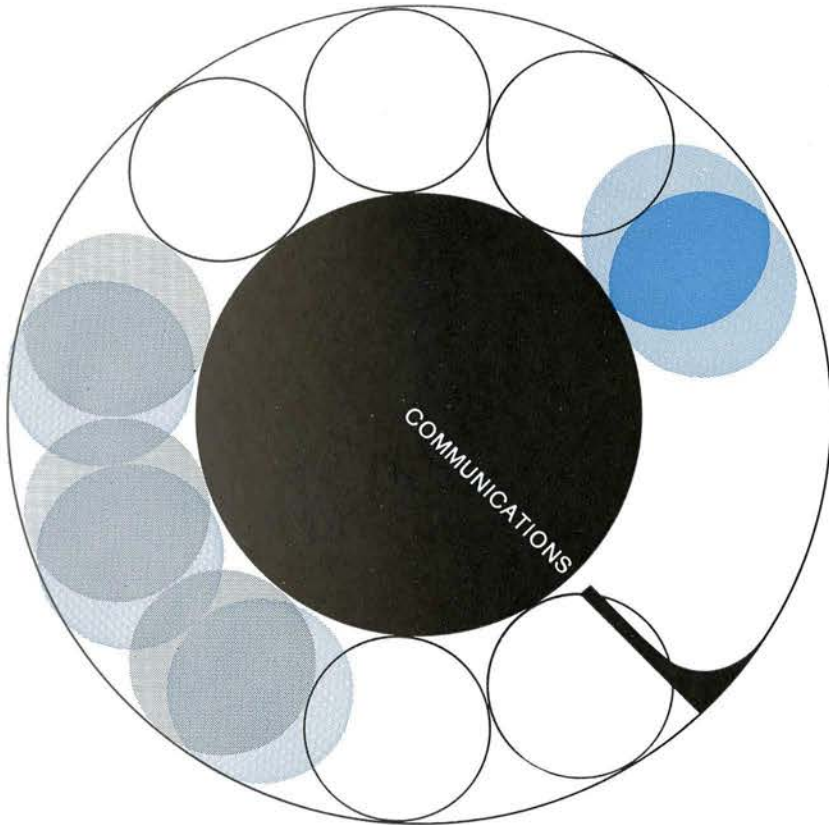
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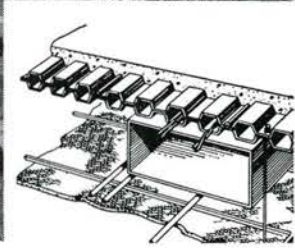
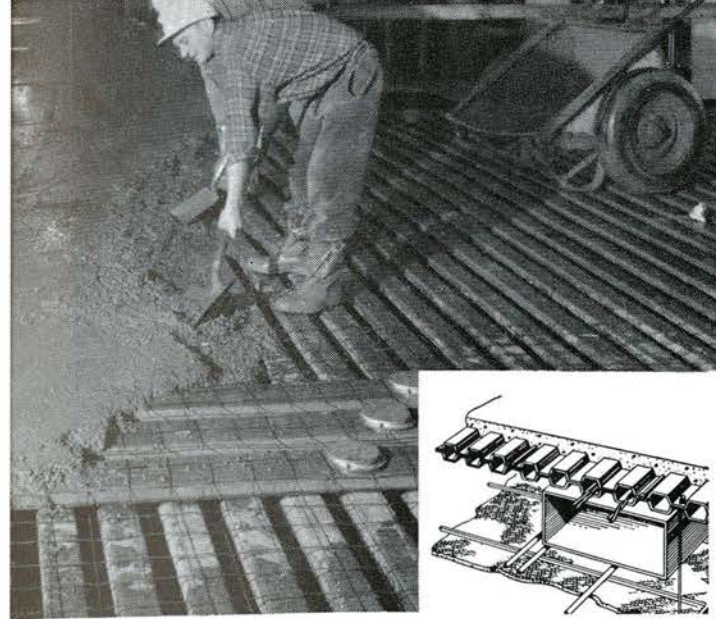


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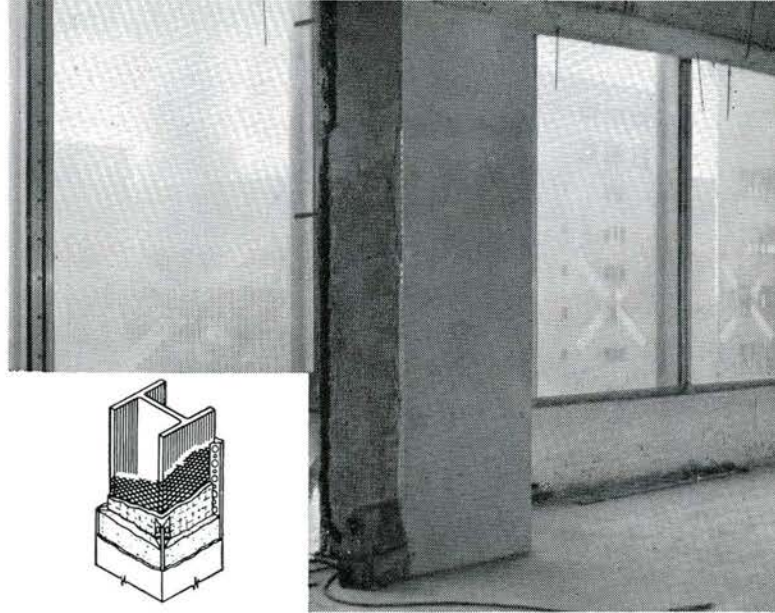
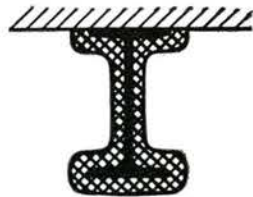
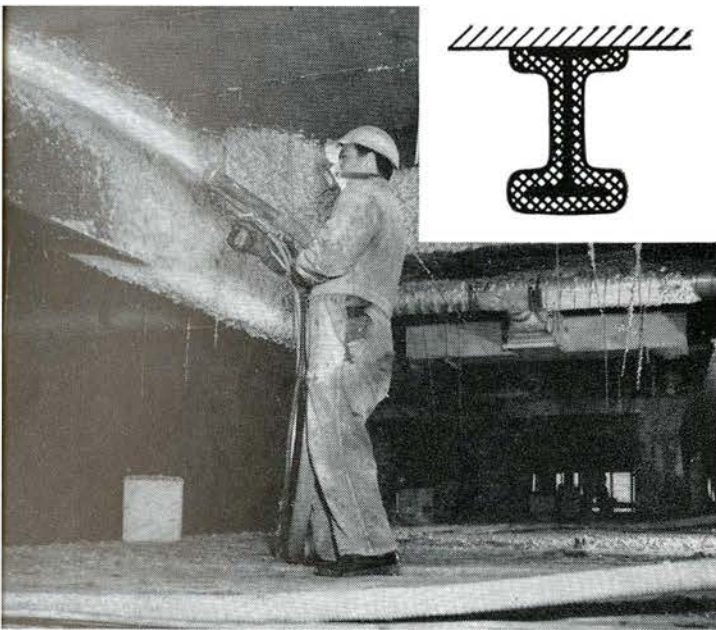
Steel frames make light

The modern steel frame building is a *light* building. It always has been, but now, with the development of G40.8 and A36 steels, it is even lighter. Permissible working stresses are increased and section sizes reduced for the same loadings. Add to this, light weight floor systems, light weight fireproofing and light weight steel partition studs, and overall dead weight is way down. This can really cut foundation costs—a factor that must be considered in cost estimates.



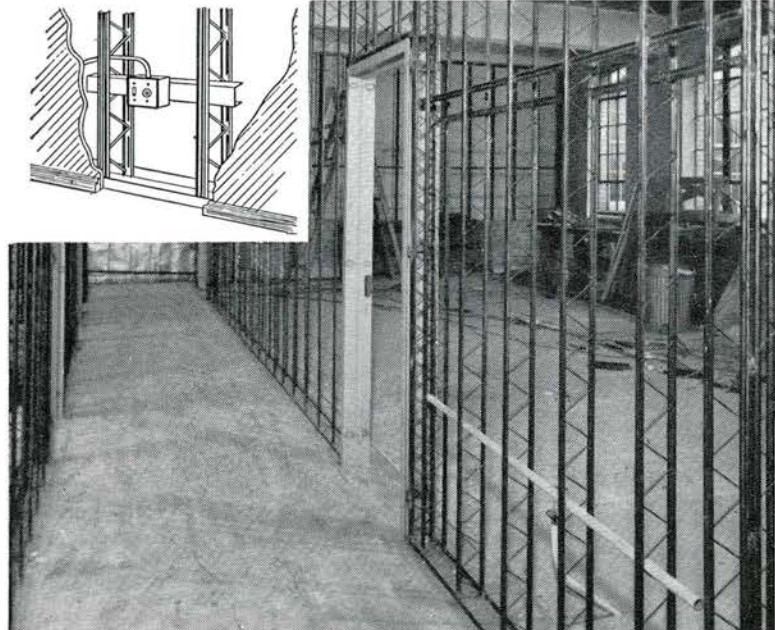
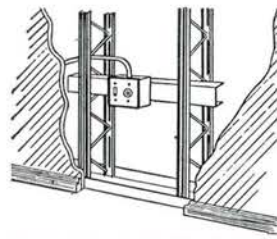
Light gauge steel cellular floor is covered with thin layer of concrete. Material is available in several shapes and sizes to suit span and service requirements. Cellular floors can provide built-in air conditioning duct, and raceways for electrical services, etc.

Mineral fibre, in this case asbestos, is sprayed on steel to provide light weight fireproofing. Material also provides valuable acoustical characteristics.



Vertical columns are fireproofed and finished with gypsum plaster over self furring metal lath. Recesses between column flanges provide excellent ducts for service pipes.

DB Litebilt open web steel stud sections provide one of the most efficient methods of building light weight low cost partitions. The material is available in four stock sizes of various lengths.



structures — here's why

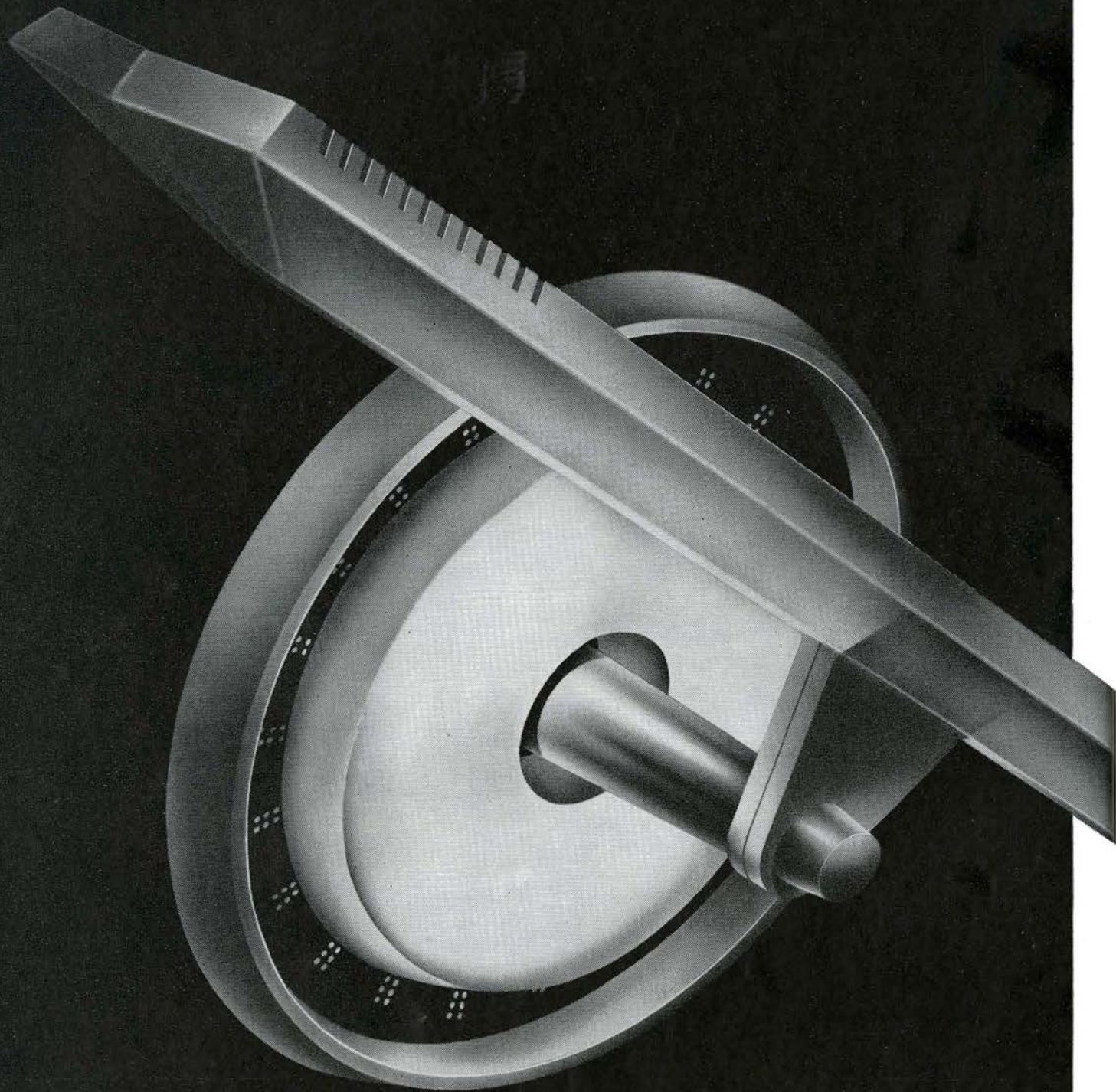
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70

Structural Division

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Flemingdon Park
Architect: Irving Grossman

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A FEW WEEKS AGO, a colleague on the Editorial Board of the Journal suggested, as a topic for research, a type of builders' house that is finding an all too ready market across Canada. It will be dealt with in detail at another time, but we are interested in it here only as it reflects public taste. We are assured that it defies all known standards of design; it is riddled with clichés, nooks and gimmicks; it can be described only as revolting to the person of taste, and yet represents to a large section of the Canadian public all that is desirable in the moderate priced house. That such a state of affairs should exist causes us no surprise, but it is none the less disturbing. That the RAIC Committee which toured Canada and reported on the "Design of the Residential Environment" caused many builders to pause and take stock, must be accepted as a proven fact. In some cases, the impact must have been sharp and in others subtle, but we would feel sure that, throughout the country, there are now builders whose product has improved, and whose horizons have been noticeably broadened. Even so, they are in business for profit, and it must be with a feeling of real disillusionment that they see others in the trade succeeding enormously with the kind of house that the Committee so roundly condemned.

Historians in the second or third millennium who write on our civilization will find oddly paradoxical the great achievements of our time in literature, science, art and architecture, alongside what we leave behind us in artifacts. They will be found under certain strata of ash, rich in strontium 90, and some twenty or thirty feet above the good earth in which the artifacts of the Victorian era patiently await the day of judgment. We once regarded the latter as horrors, but with the perspective of 1961, and our inescapable familiarity with the objects of daily use, we must revise our standards. What architect would not prefer to live in the most whimsical of Victorian villas if he had to choose between that and the most popular of contemporary Canadian builders' houses?

In the field of transportation, a score of vehicles from sleighs and buggies, through broughams to coaches, had an elegance and a refinement of detail that we have not even approached in automobiles. It is only in the aeroplane, where life itself is dependent on design and the ruthless elimination of anything that interferes with the laws of aerodynamics, that we have achieved beauty of a kind that is sometimes breath-taking in its effect on the spectator.

But where scientific giants have been at work on the external form, pygmies have designed the interior. Last week we entered a TCA plane by an ingenious retractable stair, only to find ourselves in a pink and blue compartment in which business men with their briefcases sat incongruously facing a wall decorated in gold stars in bas-relief. Would we be wrong in thinking that Queen Victoria's private railway car, horrible as it was, was less offensive?

ERA

IL Y A QUELQUES SEMAINES, un collègue de la rédaction du Journal a proposé comme sujet de recherche un genre de maisons hélas beaucoup trop en vogue au Canada. Nous en parlerons en détails une autre fois; aujourd'hui, contentons-nous d'y voir une manifestation du goût de la population. Il s'agit d'un modèle qui défie sûrement toutes les normes connues de dessin; c'est un ensemble de clichés, de recoins et d'idées fantaisistes, tout simplement révoltant pour l'homme de bon goût. Pourtant, pour un fort secteur de la population, il représente le summum dans le domaine des maisons à prix modéré. Le fait n'a rien d'étonnant, mais il est inquiétant. Le voyage à travers le Canada et le rapport du Comité sur les conditions de l'habitation ont sûrement porté beaucoup de constructeurs à s'arrêter et à réfléchir. Dans certains cas, le choc doit avoir été violent, dans d'autres plus subtil, mais il ne fait pas de doute que dans tout le Canada des constructeurs ont amélioré leur produit et élargi leurs horizons. Mais, que voulez-vous, ces hommes sont en affaires pour gagner de l'argent et il doit être frustrant pour eux de voir des collègues remporter de grands succès en construisant les maisons que le Comité a si vertement condamnées.

Les historiens du deuxième ou troisième millénaire, qui étudieront notre civilisation, seront frappés par le contraste entre nos grandes réalisations dans les domaines de la littérature, des sciences, des arts et de l'architecture et nos produits ouverts. Ils trouveront ceux-ci enfouis dans des couches de cendres encore contaminées de strontium-90, à quelque vingt ou trente pieds au-dessus de la bonne terre où ceux de l'ère victorienne attendront patiemment le jour du jugement. Autrefois, ces derniers nous apparaissaient comme des horreurs mais, dans notre perspective de 1961, avec notre inévitable familiarité avec les objets d'usage courant, nous sommes forcés de réviser nos normes. Quel architecte ne préférerait pas habiter les villas les plus fantaisistes de l'ère victorienne plutôt que nos maisons contemporaines à la mode?

Dans le domaine des transports, une douzaine de véhicules, depuis les traîneaux et les bogheis jusqu'aux coupés et aux carrosses, avaient une élégance et un raffinement de détails jamais atteints par nos automobiles. Seul l'avion, où la vie dépend du respect des lois de l'aérodynamique, présente une beauté qui réellement en impose au spectateur.

Mais si la forme extérieure est l'oeuvre de géants scientifiques, l'intérieur est le travail de nains. La semaine dernière, en entrant dans un avion d'Air-Canada par un ingénieux escalier escamotable, je me suis trouvé dans un compartiment rose et bleu où des hommes d'affaires faisaient face à un mur décoré d'étoiles d'or en bas-relief. Le wagon privé de la reine Victoria était peut-être horrible; il était sûrement moins choquant.

HOUSING

INTRODUCTION

by *Henry Fliess*

THE WORK PUBLISHED in this issue is indicative of the progress which has taken place in multiple housing in Canada in the last decade.

With the rapid urbanisation of the Canadian population, the amount of rental housing in the major Canadian cities has been on the increase. In Metropolitan Toronto, a stronghold of the single family house, rental housing is expected to form 60% of the total number of housing units by 1980.

This demand for rental units resulted first in two and a half storey and three and a half storey apartments in strip type developments along major traffic arteries, and was later superseded by the five storey, six storey and seven storey bearing wall structure, all box like in character and unembued with imagination.

Unfortunately, this type of development still continues but is slowly being brought to a halt by planning and mortgaging controls and public reaction, the latter brought to bear by the high number of vacancies. This dreary picture has been superseded by the gradual emergence on the one hand of the high-rise apartment, freeing the land and permitting large open spaces, and on the other by various forms of horizontal multiple housing providing accommodation suitable for families with children. Row housing, for some reason, has left a bad taste in the public mind, perhaps because of the long uninterrupted rows found in the older sections of some Canadian cities. Some well conceived recent projects have laid the ground work for a fresh acceptance of this form of housing, and some new horizontal and vertical combinations of multiple units have produced increasing variety and possibility of architectural expression.

The most important development, however, has been in the comprehensive planning of multiple housing, providing accommodation for the various needs of the growing family.

Of all the projects illustrated in this issue, Flemingdon Park has been the greatest opportunity and the greatest achievement. It indicates how, given large enough an area in the proper location, developer and architect can combine to produce an environment which is well planned, balanced in its accommodation, ample in the provision of open spaces (in spite of high densities), and vigorous in its architectural character. Putting the car underground is the logical development in a society where the car all but dominates planning. The pedestrian has again been elevated to his rightful place, and has been provided with paved pedestrian streets and open park spaces.

Unfortunately, such opportunities have been rare and it is unusual even today to have one developer plan and build such a large, comprehensive development. The standard procedure, even in well planned communities, is to sub-divide the multiple housing lands and sell them off, at best under some form of design control. But controls are no substitute for creative large scale planning and development.

Strange as it may seem, the architect of Flemingdon Park and the architects of the five selected designs in the CMHC Smyth Road Competition are relative newcomers on the Canadian housing scene. This would seem to indicate that the architectural resources are available, if only they were tapped and given the opportunity, to provide a far better housing environment in Canada than the present norm.

The Smyth Road Competition served a useful purpose in bringing such talent forward.

Whitburn Apartments

Township of North York, Ontario

ARCHITECTS

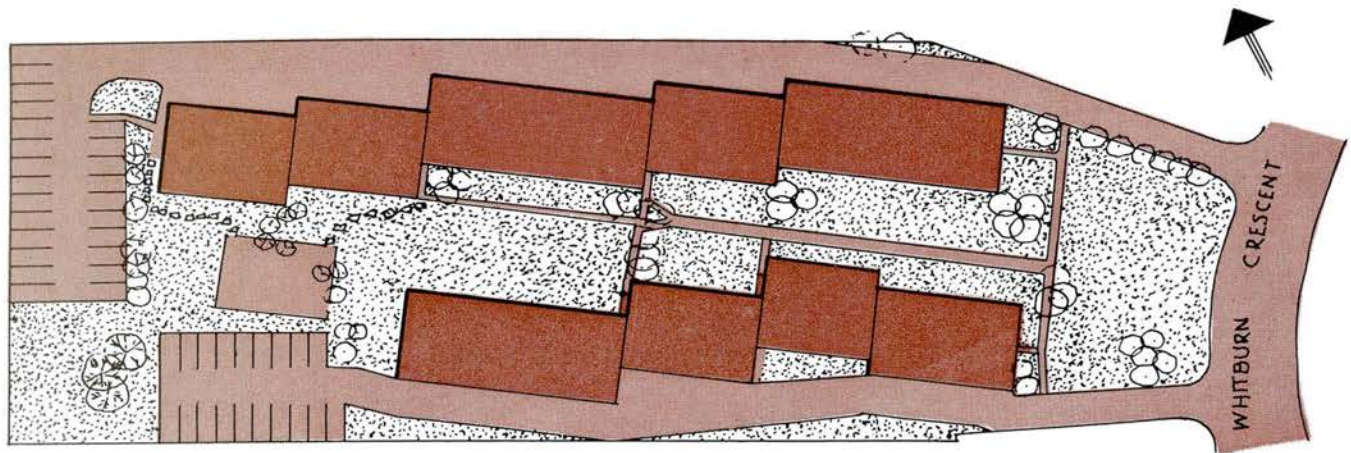
Jerome Markson, Jack Klein & Henry Sears, Associated Architects

STRUCTURAL ENGINEERS

Halsall & Dowdell

OWNER, BUILDER

Bismark Holdings Ltd.



THE SITE

The site is an elongated point of land sloping sharply down from the road and surrounded on three sides by a heavily wooded ravine.

THE REQUIREMENTS

The requirements of the owners necessitated the provision of two long parallel buildings sited so as to permit the legal severance of the site with two parcels. The buildings were to be built to a very rigid budget and to be of "standard construction".

- masonry bearing wall;
- concrete slab on steel joists;
- concrete balconies;
- residential steel sash and doors.

THE SITING

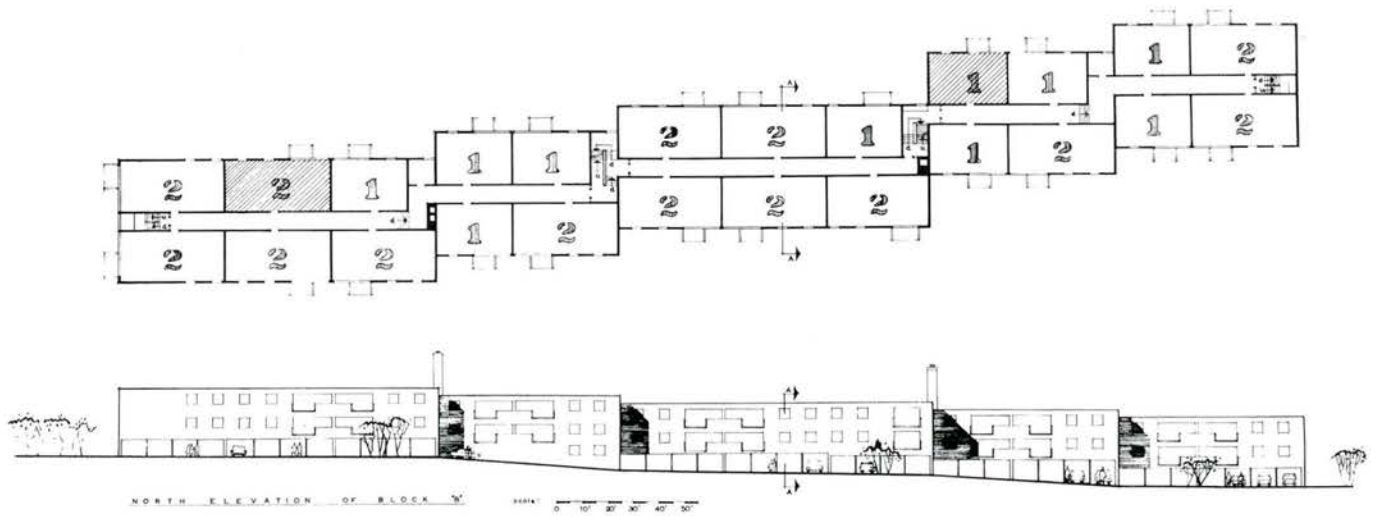
The natural contours of the site were used to provide open carports under the building on the lower or outer sides, and to permit the stepping of the building and the terracing of the central "common" created between the buildings. The stepping is accompanied by the offsetting of the blocks in plan with each change level, thus permitting the central area to be further modulated.

THE BUILDINGS

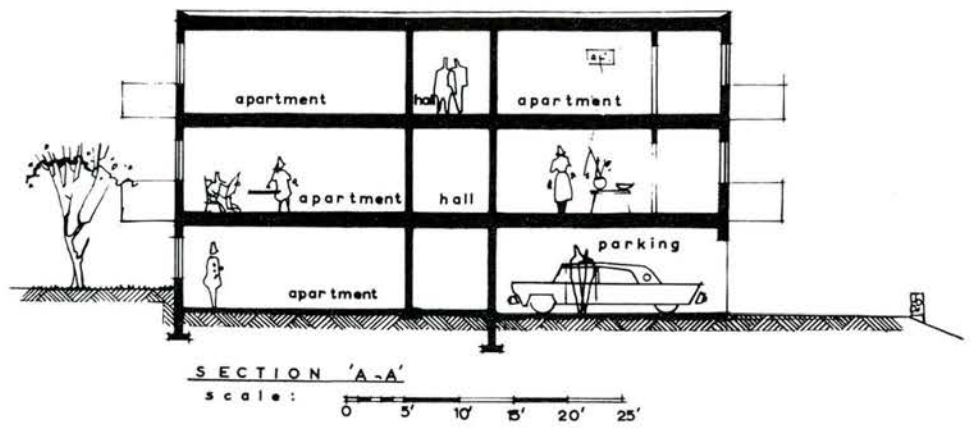
The concrete balconies with their upturned edges provide strong sculptured elements on the simple masonry expanses. The entrance canopies were kept visually light and transparent so as to not detract from the main massing of the buildings. The architects attempted to provide simple modest buildings sited appropriately to this particular site.

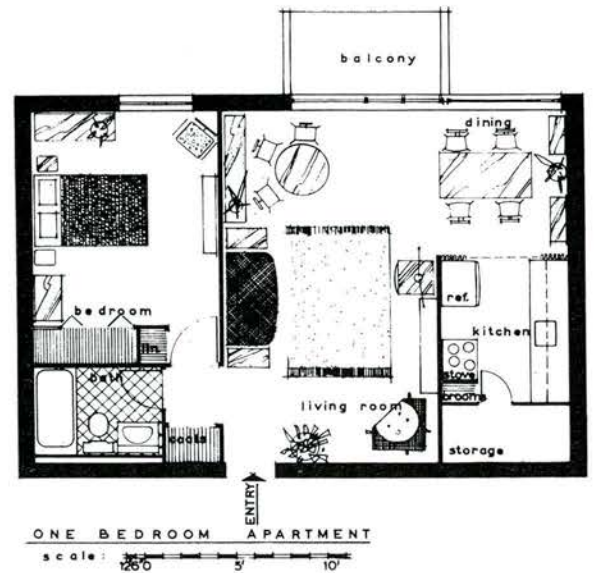
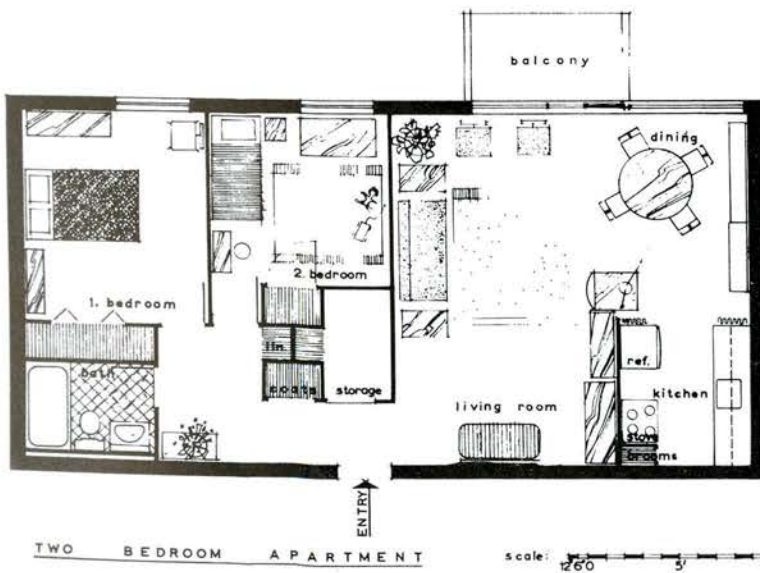
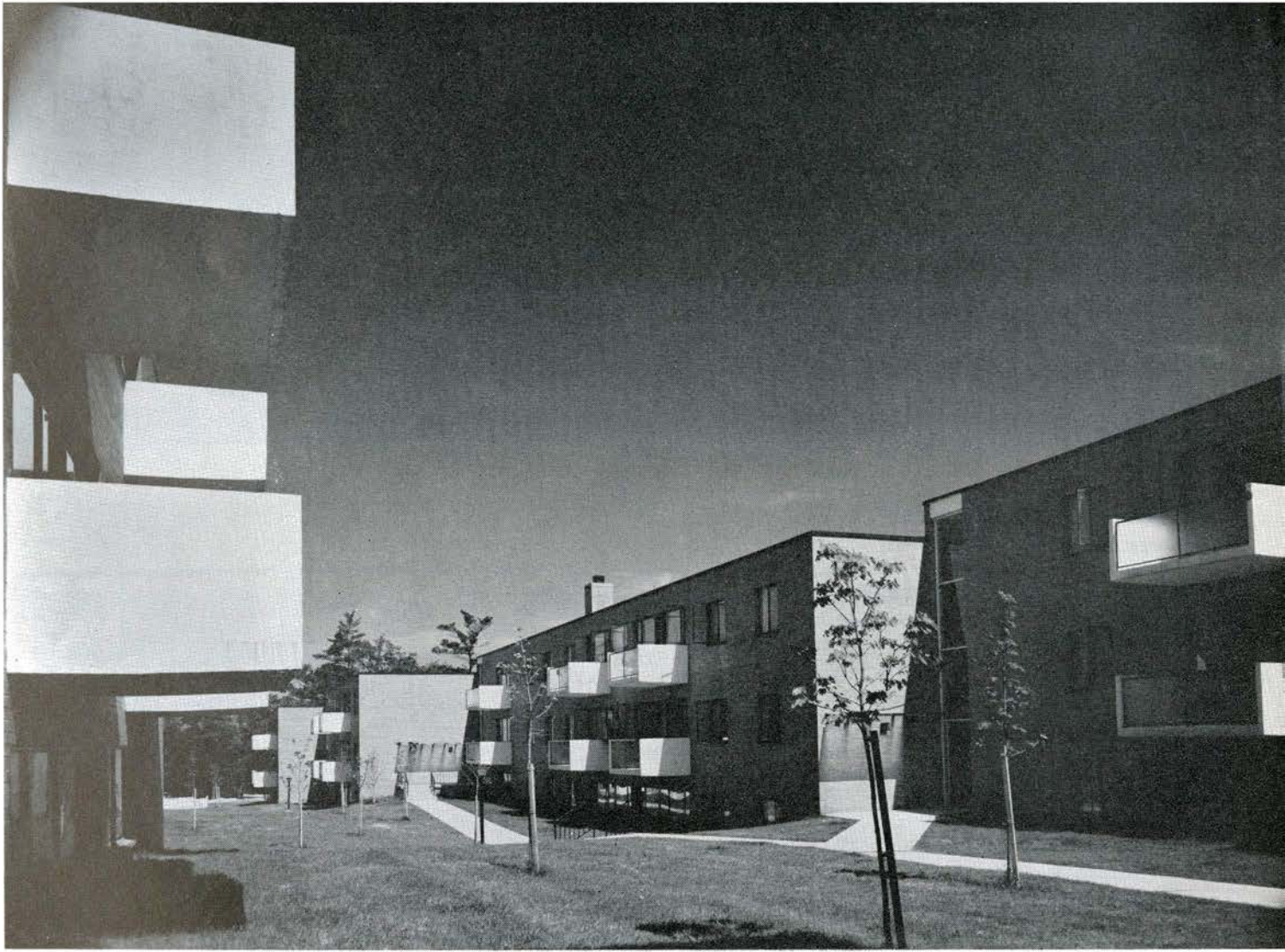
THIS APARTMENT SCHEME by Jerome Markson and Henry Sears indicates the best that can be done within the limitations of the economical walk up apartment on a typical narrow and deep site. The solution breaks down the usual dull apartment box into a sensitively sited grouping which, while employing the standard norm, achieves a humanness not normally found in such a project. In addition it carefully segregates the motor access from the green and play spaces. While details standard to the speculative apartment are used, they achieve a freshness in this project by intelligent use. The staggered exterior form is reflected on the interior by a breaking down of the long and endless apartment corridors. In every way this is a carefully thought out and well conceived project.

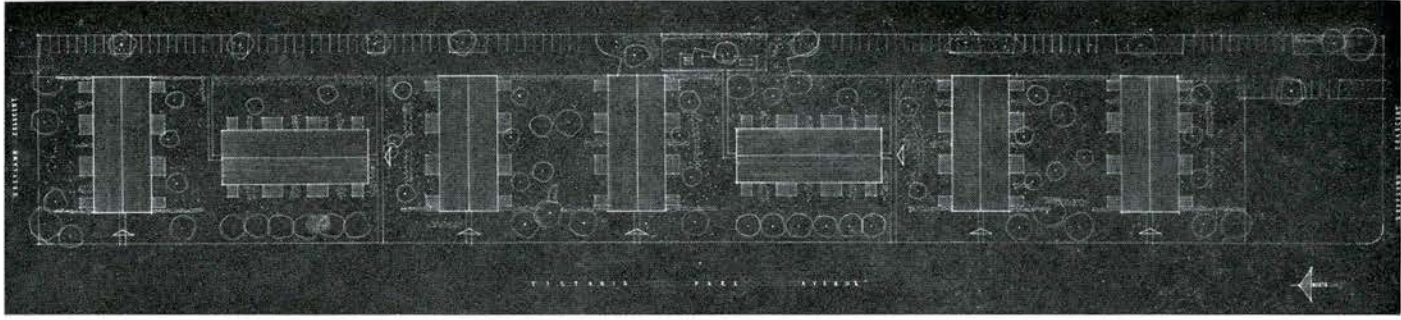
Henry Fliess



WHITBURN APARTMENTS







Maisonette Project

Toronto

ARCHITECT

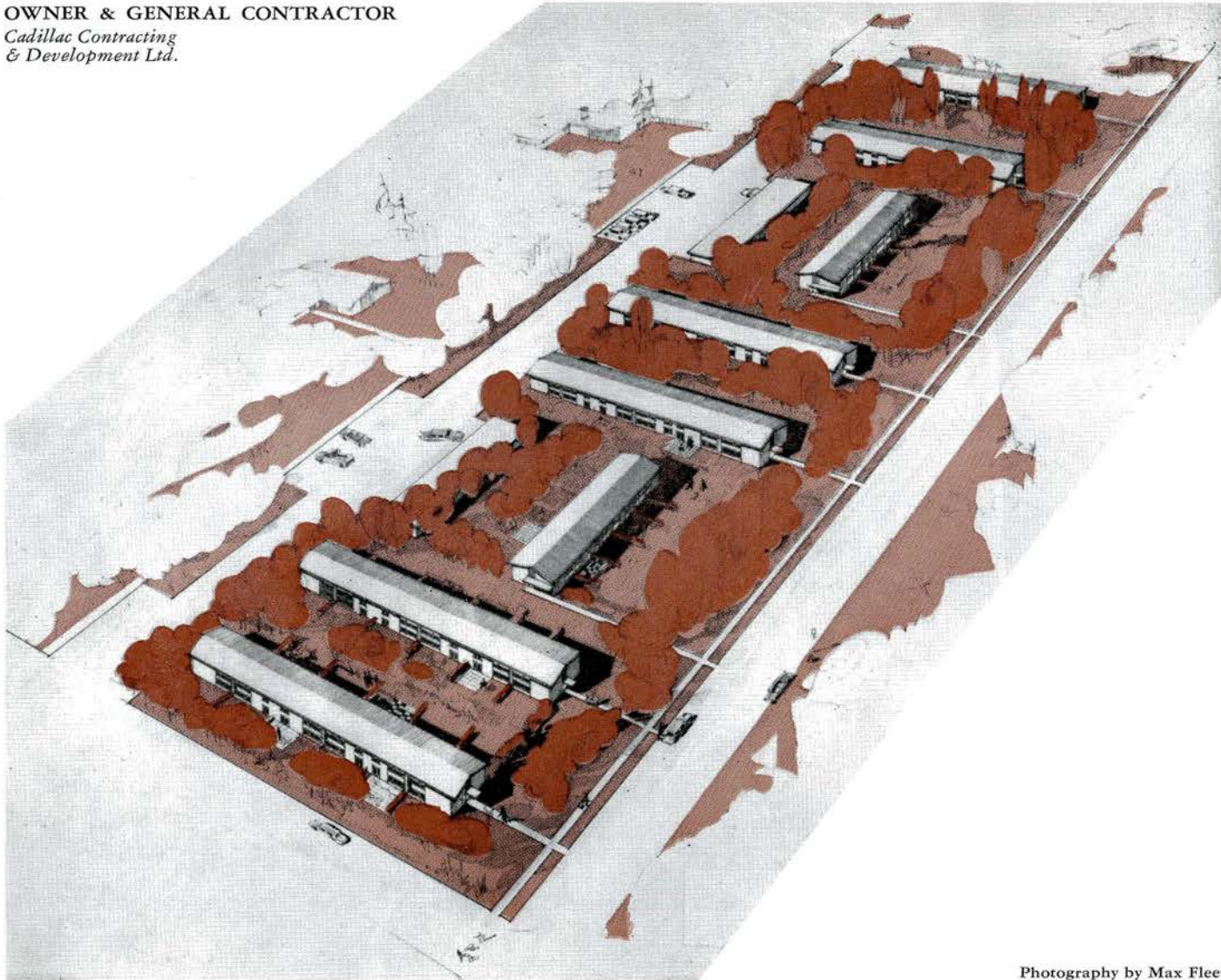
Henry Fliess, Toronto

LANDSCAPE CONSULTANT

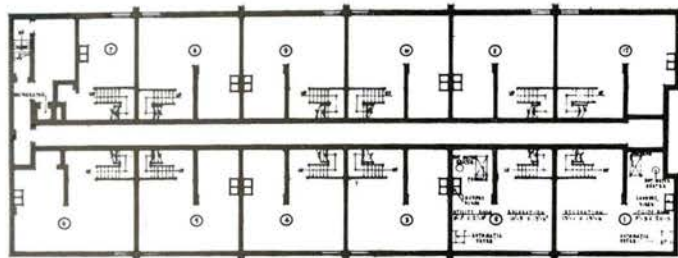
George Tanaka

OWNER & GENERAL CONTRACTOR

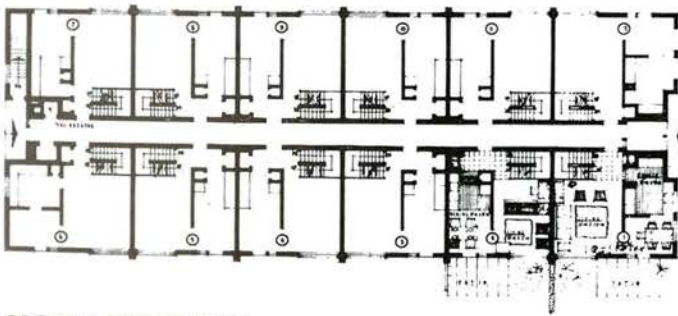
*Cadillac Contracting
& Development Ltd.*



Photography by Max Fleet

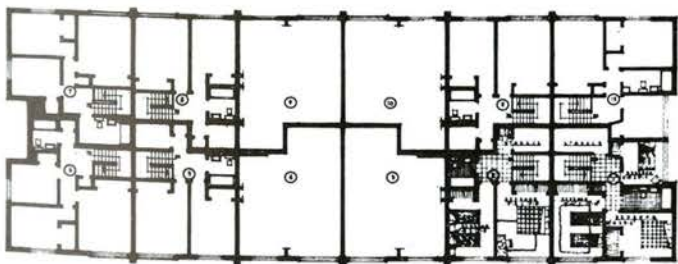


BASEMENT PLAN



GROUND FLOOR PLAN

SECOND FLOOR PLAN



AT THE TIME the project on Victoria Park Avenue was being considered, the only forms of rental housing available in Toronto were apartment buildings. South Hill Village in Don Mills and one or two other row housing projects had been built a year or two previously to provide much needed accommodation for families with small children, but the row house, which provides densities of 10-15 units per acre, proved uneconomical for any sites under consideration because of the astronomical land values. A unit therefore had to be developed which could make better use of the land available. The first thought that came to mind was of row houses located on each side of a 40' wide paved pedestrian mall, but this involved difficulties in garbage collection and walking distances to car parking. (Later intelligently solved in the Flemington Park).

The next logical development was to use a central corridor instead of the pedestrian mall, providing in effect back to back row housing but with access from the interior and therefore retaining the privacy of the garden space. This



type of building later called a maisonette "apartment" provides a covered corridor from the car, and the garbage problem is solved by means of an incinerator, doing away with one of the worst problems of the row house — the line of garbage cans on collection day. In order to avoid the unsightliness of laundry lines or umbrellas, gas dryers were provided by the owner for each tenant and no outside laundry hanging was permitted. Each housing unit consists of living-dining kitchen areas on the main floor, bedrooms on the second floor and a basement, utilities and recreation area. Heating is by gas-fired individual hot air furnaces. The densities that can be achieved are between 15-20 units per acre.

The first project on the east side of Victoria Park Avenue was built in 1955. Its architectural character was purposely rather conservative with a slightly pitched roof to come as close as possible to the public expectation of family housing units. Spacings between buildings is 90'. Individual units have private patios separated from other units by wood screens and shrub planting but remaining relatively open to the central green space.

The second project called "Clintwood Maisonette Project" was built on the opposite side of Victoria Park Avenue in 1961. Basically the same housing units are used but the architectural character is more direct and the individual unit is emphasized by projecting brick walls. The buildings are longer and are staggered to provide more interesting spaces between. The site planning of the first project gave several lessons which were put to use in the later development. Children tended to use the parking lot, (the only hard surface area) for tricycling, and the sodded open spaces were quickly worn down. On this basis the central portion of the green spaces in the Clintwood Project were paved with asphalt and curved in interesting shapes. The asphalt areas were relieved with plant beds and sand boxes. The latter being placed one to each garden space so that mothers may supervise from the kitchen windows. This has been omitted in the buildings reserved for older people, and, unexpectedly, it has been found that many older couples prefer this type of dwelling to apartments. The central asphalted areas have been separated from the individual patios by heavy shrub planting to create a sense of privacy greater than was apparent in the first project. Private garden spaces are approximately 20' x 20' and are divided from each other by wood frames. The frames are latticed with plastic cords allowing vines to provide a natural screen. This was thought to be a faster and more satisfactory method than the hedges used in the first project.

The obvious criticism of this particular type of maisonette building is the lack of privacy and individual expression inherent in the central corridor. Two minor problems have presented themselves; noise transmission between apartments through the corridor can be a nuisance, but no more so than in the standard apartment building; and children, of which there are naturally a great number, enjoy running up and down the full length of the corridor. Yet, with all this considered, this unit is better than the European four storey maisonette in which the upper unit has no direct relationship to the ground. The row house is obviously still a preferable unit where landcosts permit its use.

Clintwood Maisonette Project

Toronto

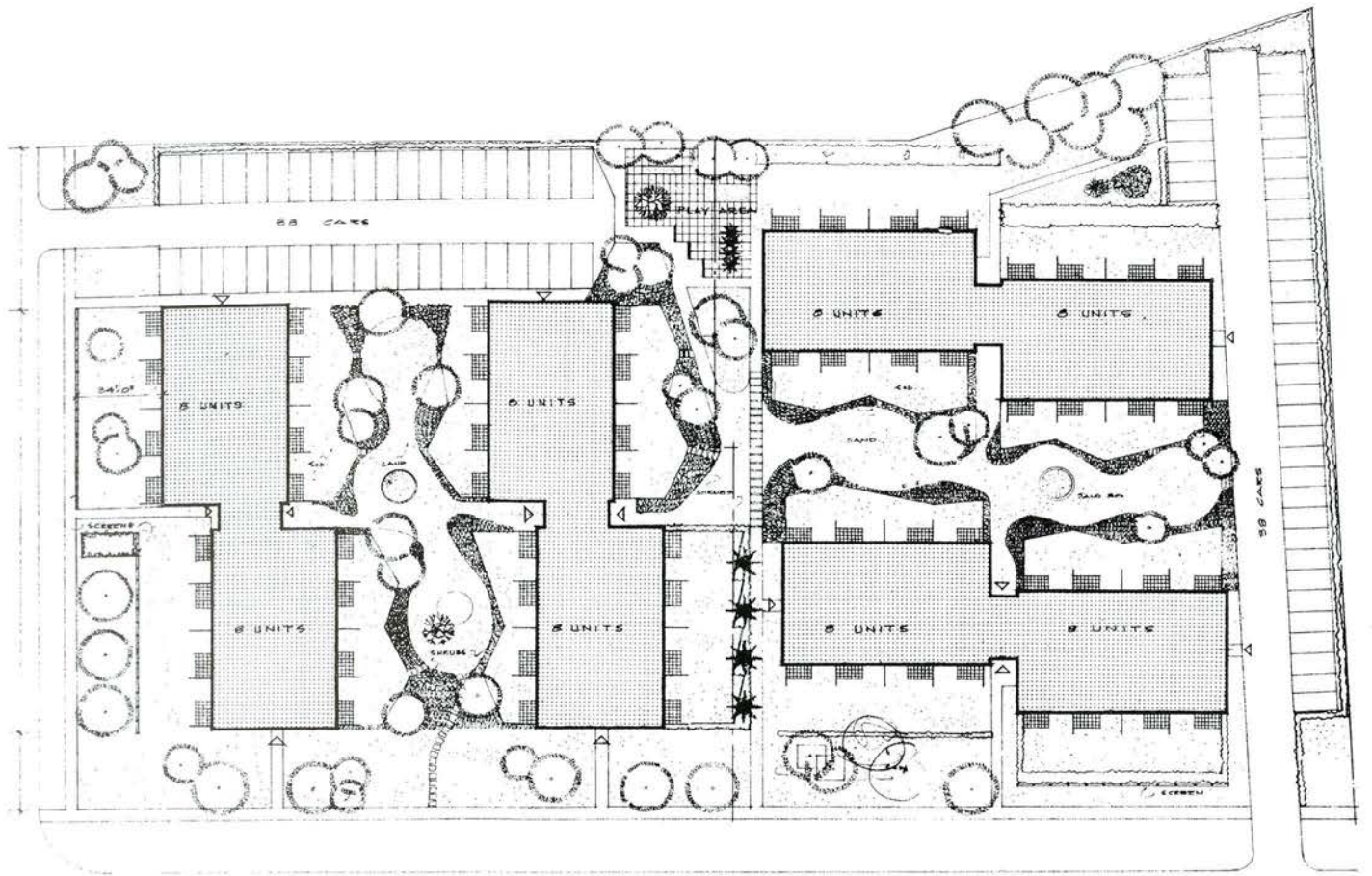
ARCHITECT

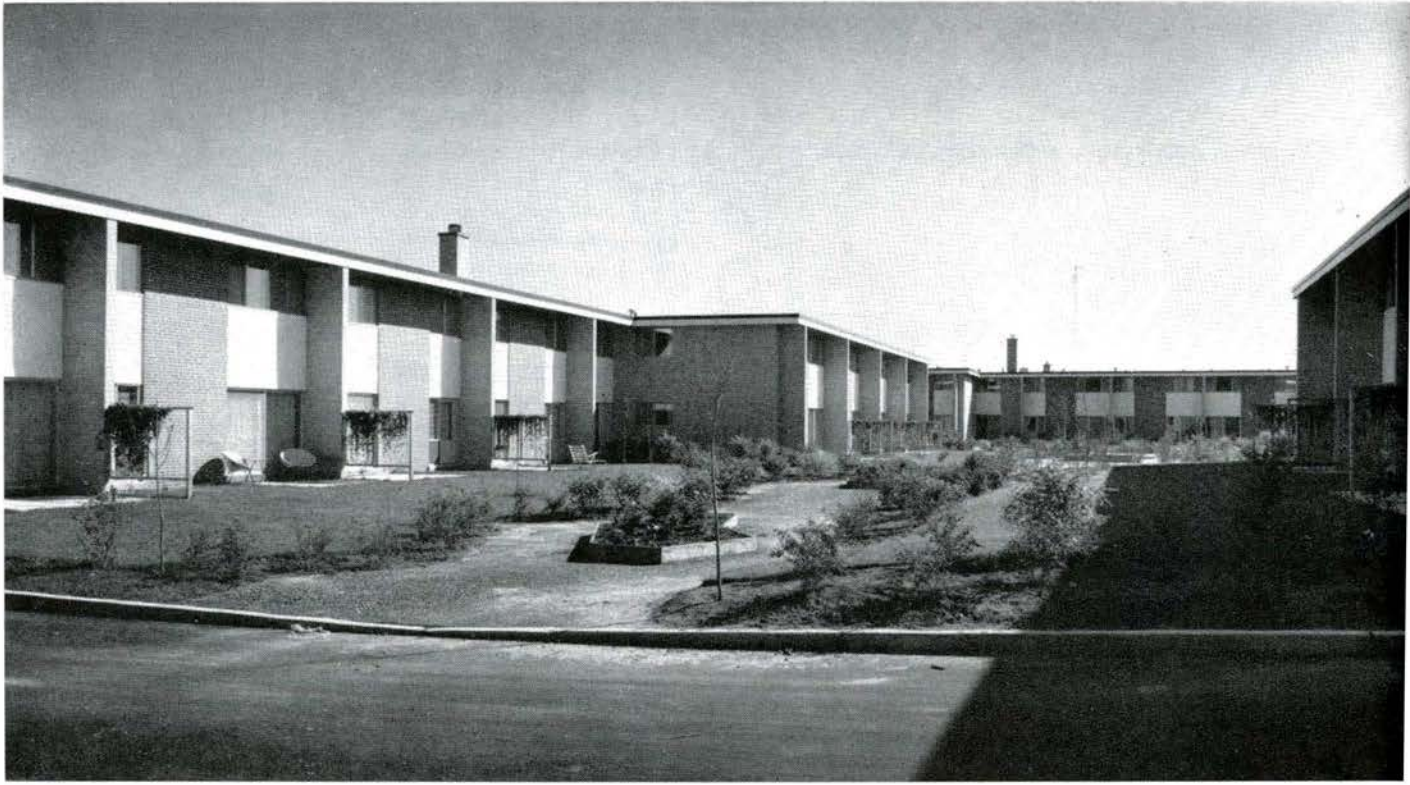
Henry Fliess, Toronto

OWNER & GENERAL CONTRACTOR

*Cadillac Contracting
& Development Ltd.*

Photography by Neil Newton





FIRST FLOOR PLAN



GROUND FLOOR PLAN



Holly-Dunfield Apartments, Toronto

ARCHITECTS: *Burston, Wells & Tampold, Toronto*

STRUCTURAL ENGINEERS: *Farkas, Barron & Jablonsky*

MECHANICAL ENGINEERS: *Konforti, Shore & Ass.*

LANDSCAPE ARCHITECT: *Austin Floyd*

Photography by Panda

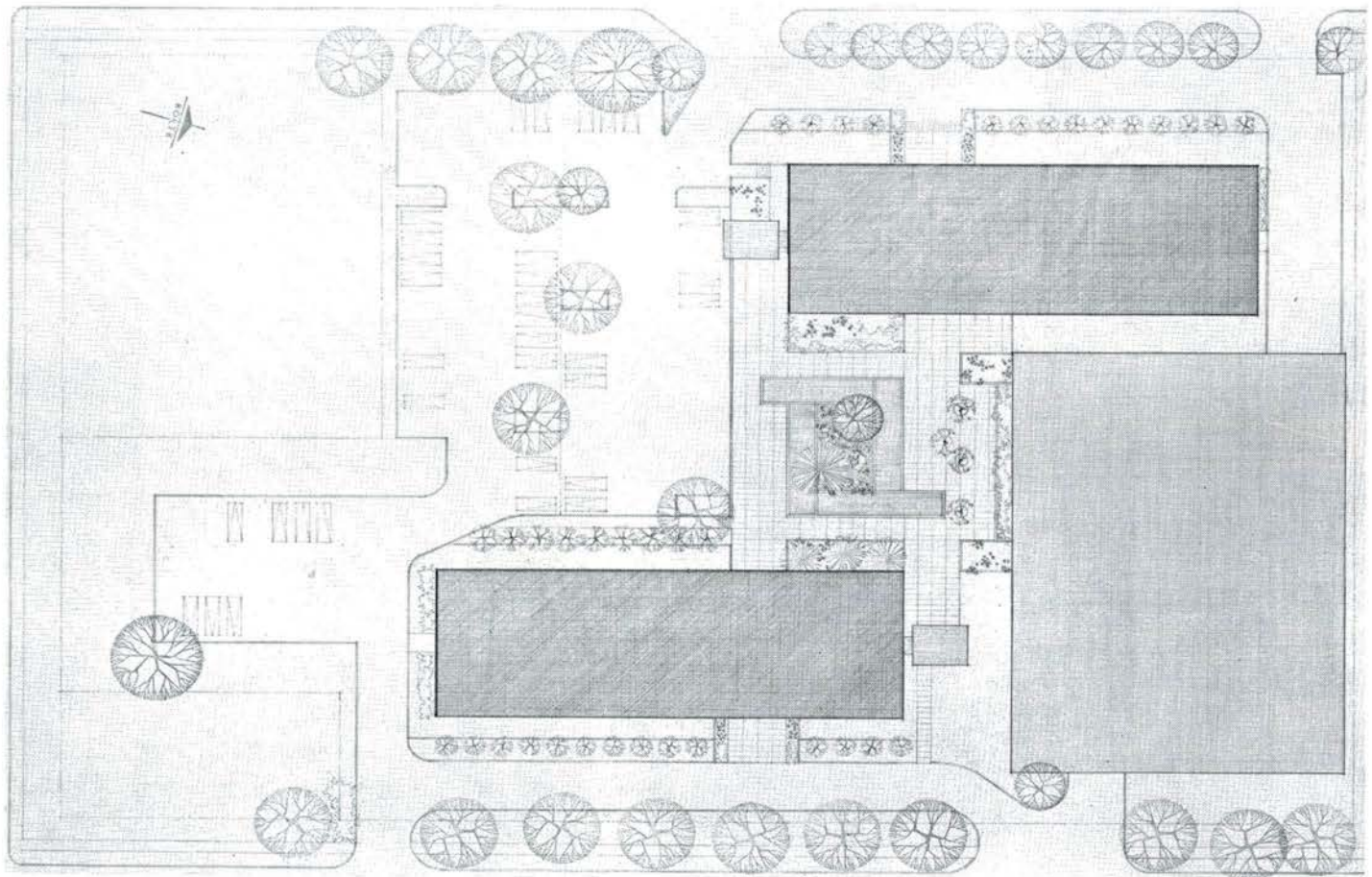


THE REVISED Zoning By-laws for apartment buildings, although they reduce land coverage and are more restrictive with respect to heights and setbacks, make possible nevertheless, a more urban residential development. The product of the earlier Zoning By-law was a low, long, apartment block with most of the windows looking onto a narrow side yard shared by a similar apartment block.

The new zoning encourages the development of large blocks of high-rise buildings with light and air on all sides, and increases areas for landscaping. The revised apartment zoning standards should still be subject to close scrutiny and revision, particularly where the "letter of the law" in some cases produces a result contrary to the spirit of the Zoning By-law. The matter of parking still requires further attention.

The new Toronto apartment zoning standards depart from the standard setback principle by introducing a system of angular vertical and horizontal planes of 60 degrees and 80 degrees respectively, coupled with a floor space index and a minimum landscaping provision of 35%. The vertical angular plane ensures adequate light and provides for the spacing of apartment slabs from lot lines as well as between buildings. The horizontal angular plane permits the narrow edge of a slab to be sited closer to the lot line where the building is at right angles to the lot line. This prevents the slab from shielding light from an adjacent property.

Ed.





HOLLY-DUNFIELD APARTMENTS



COMMENT ON THE RESIDENTIAL DEVELOPMENTS

THE FIRST 500 DWELLING UNITS ARE COMPLETE and inhabited in Flemingdon Park. The next 200 are under construction, with many more soon to start. The master plan of a total community of 15,000 inhabitants, complete with its schools, churches, shopping, industrial and commercial areas is now being realized in a process which will continue over the next four years.

The birth pains are over.

There is evidence of an idea at work.

Many factors influence a venture of this size and scope. Probably the most important, I have found, are *teamwork* and *continuity*. The complex agencies of overall planning, finance, administration, legal know-how, construction, site engineering, etc. are invariably necessary to put an enterprise such as this into being. It is when representatives of all these agencies are integrated with the architect to form a working team that the chances for success are greatly increased. For it is in the working process that the architect is able to absorb into his own thinking the influences, which these specialized agencies exert, and at the same time influence them in return. Important as these influences are, it is the architect who translates them into the reality of bricks and mortar; and when he is able to deal with them directly day to day as part of a team, rather than struggle with them periodically as outsiders, this translating process becomes more immediate and significant.

The element of continuity becomes vitally important when the questions of quality and ultimate aims are raised, for if the initiators of an idea are able also to execute it, the controls leading to quality are more readily maintained.

In Flemingdon Park, such a team has been present and working together almost from the initial inception of overall ideas to the detailed deliberations, concerning landscaping and color schemes. Sparked by imaginative leadership, this team has been able to relate the many aspects of economics, architectural design and community living, infusing the whole, at the same time, with a common purpose and enthusiasm.

Herein lies, from my experience, an important difference between this venture and so many others in the commercial world of housing and development. Whether this means that the only way our cities can grow properly, particularly in the residential field, is with the continuing guidance of such teams, is a great question. If it is the only way, then it would appear that the Utopia of planned environment will be difficult to realize, since the Flemingdon situation is indeed the exception rather than the general rule.

It is perhaps too early to try to evaluate what has been built so far. For myself, the architect, the sight of children at play in the open greens, of people strolling along the landscaped pedestrian malls while cars move unseen in the garages below, is, of course, a source of satisfaction in itself. Perhaps the social qualities of this kind of architecture often overshadow the aesthetic.

From the point of view of form and space, we have attempted to achieve a variety and richness which, within the context of the present day vocabulary of modern architecture, seems so difficult to attain. The variety of dwelling types provided, each answering specific accommodation needs of the public, has been one source of varied form, which, at the same time, has permitted some degree of dwelling identity.

The shapes of the unit modules have been manipulated so that, when put together in series, they produce articulated profiles and changing directions of axes.

The repetition of similar basic types within each block of land is a direct expression of zoning by-laws as they stand today. In block H-3 however, presently under construction, the first attempt at mixing types is evident, producing two, three and four storey elevations contiguously along a pedestrian street.

The linear nature of this pedestrian concept could lead to an even greater texture of form and space whereby, connected to the same underground route, one can envisage the whole gamut of residential forms, from row houses to tall point blocks. Perhaps this is the direction that our future developments might take, and this, hopefully, may lead to the excitement and vitality our streets once had. For, let's be honest, deep down in the innermost recesses of the present day architect's conscience still lies, I suspect, the embarrassing and frustrating awareness that, from the visual point of view, the best communities we are building today are not really as good as the best communities of the past. But this is changing, I am sure. *Irving Grossman*

Flemingdon Park A Planned Community

RESIDENTIAL DESIGN AND SITE LAYOUT

ARCHITECT

Irving Grossman, Toronto

STRUCTURAL CONSULTANT:

M. S. Yolles & Associates

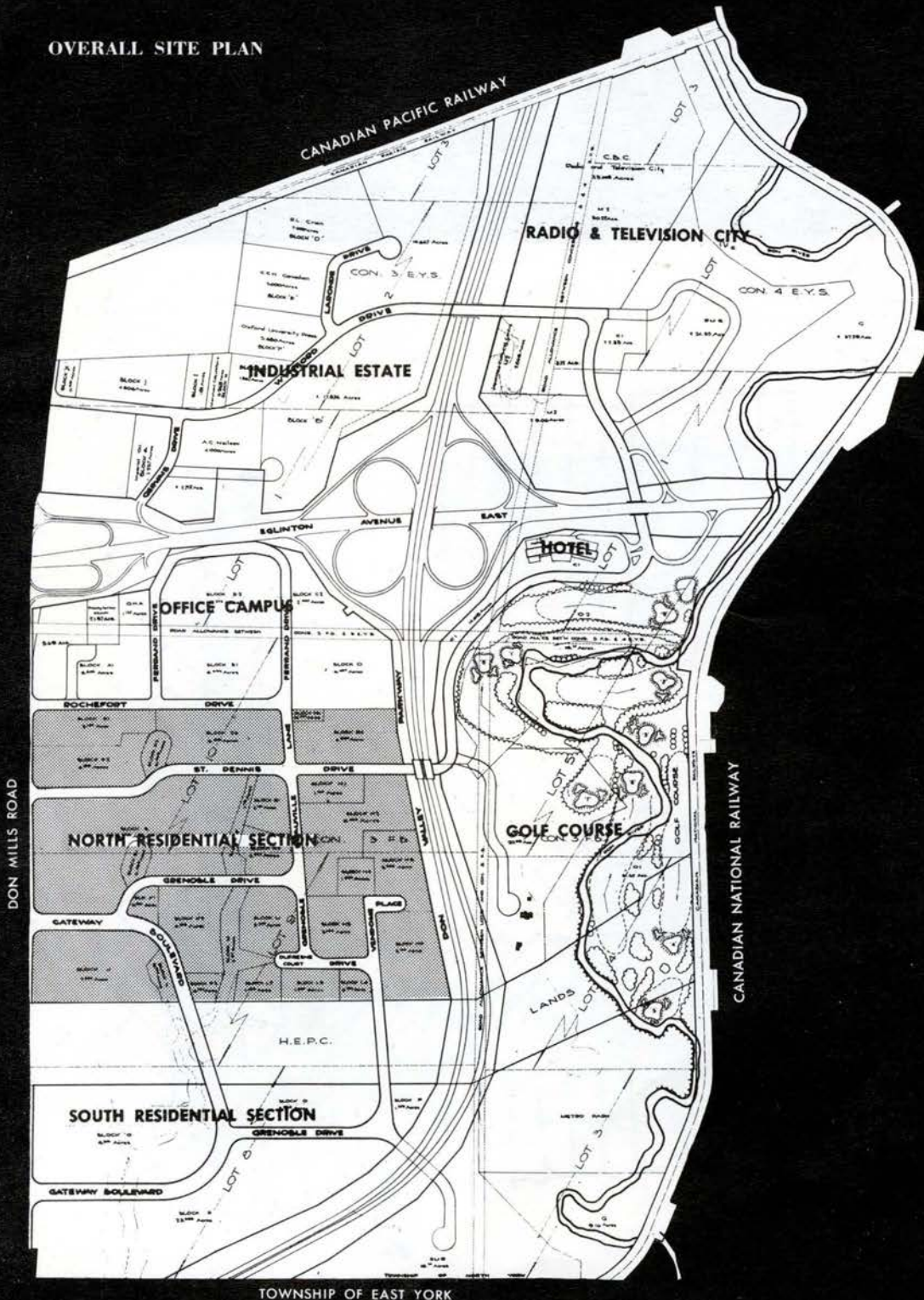
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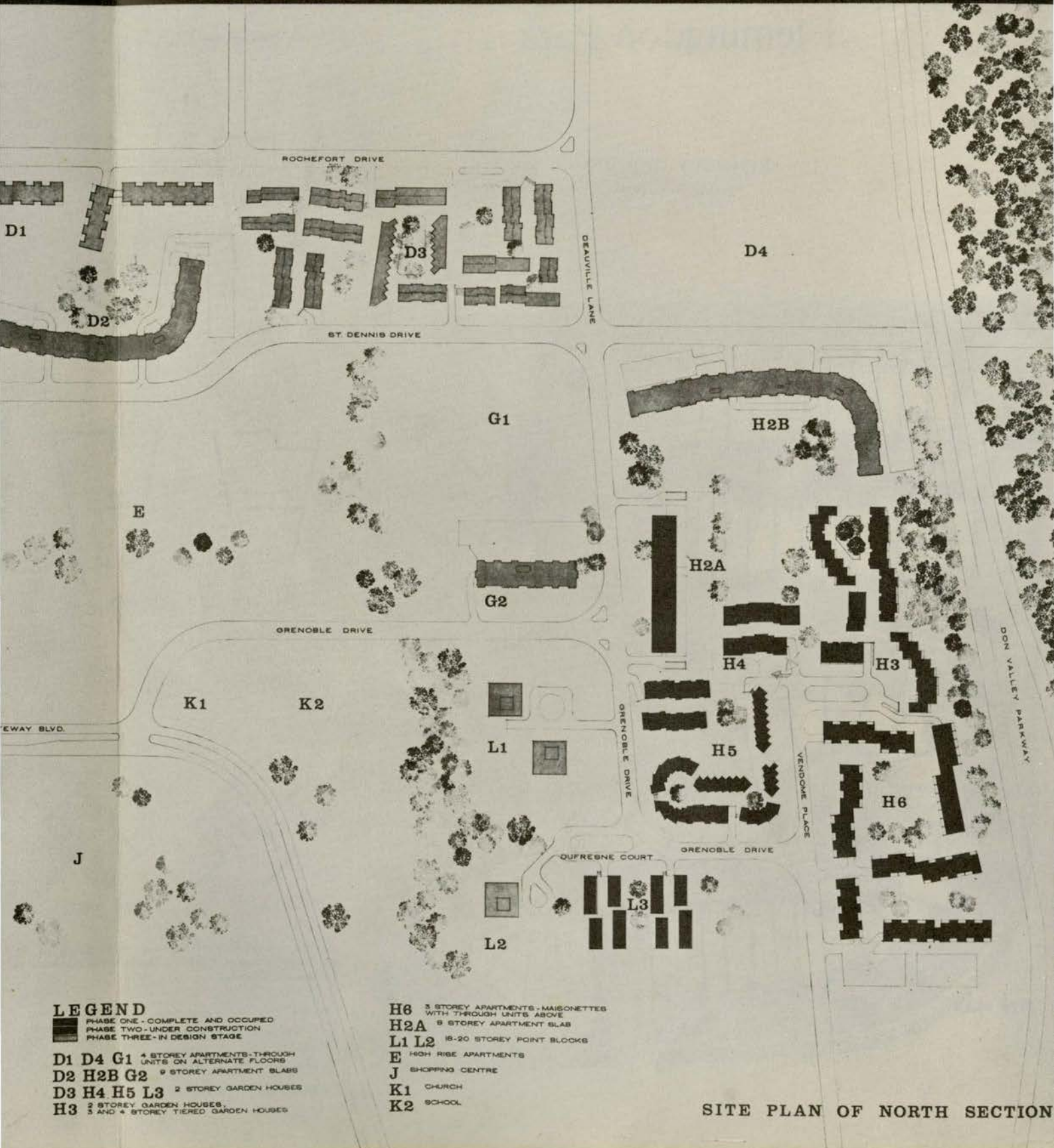
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DEVELOPMENT AND CONSTRUCTION *Webin Communities*

OVERALL SITE PLAN



TOWNSHIP OF EAST YORK



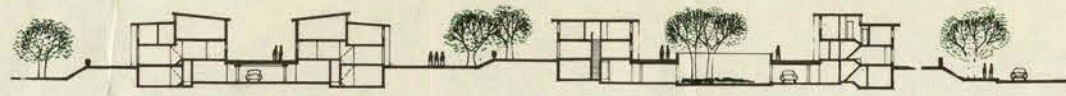
LEGEND

- PHASE ONE - COMPLETE AND OCCUPIED
- ▨ PHASE TWO - UNDER CONSTRUCTION
- PHASE THREE - IN DESIGN STAGE

- D1 D4 G1 4 STOREY APARTMENTS-THROUGH UNITS ON ALTERNATE FLOORS
- D2 H2B G2 9 STOREY APARTMENT SLABS
- D3 H4 H5 L3 2 STOREY GARDEN HOUSES
- H3 2 STOREY GARDEN HOUSES, 3 AND 4 STOREY TIERED GARDEN HOUSES

- H6 3 STOREY APARTMENTS - MAISONNETTES WITH THROUGH UNITS ABOVE
- H2A 9 STOREY APARTMENT SLAB
- L1 L2 18-20 STOREY POINT BLOCKS
- E HIGH RISE APARTMENTS
- J SHOPPING CENTRE
- K1 CHURCH
- K2 SCHOOL

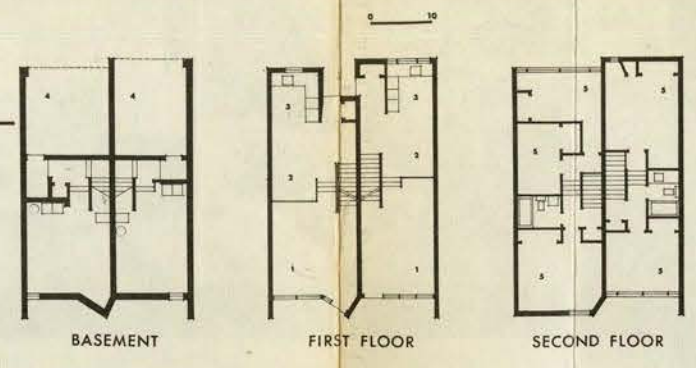
SITE PLAN OF NORTH SECTION



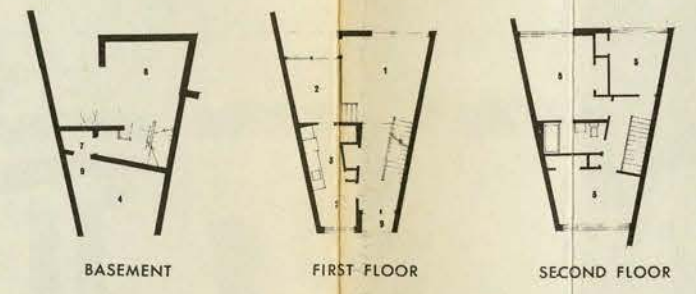
SECTION THROUGH BLOCK H5 with building A on the left, and B on the right. This shows the sunken garden in building B which provides light, air and vegetation down to car circulation level.

Flemington Park

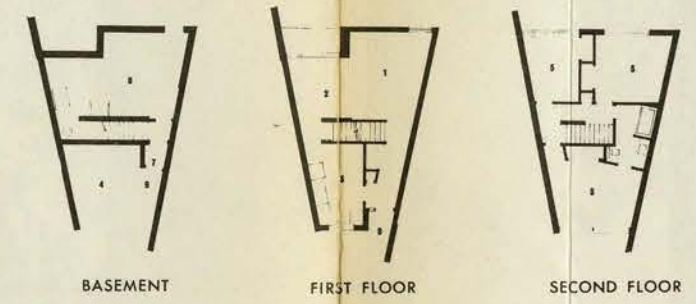
ARCHITECT (HOUSING)
Irving Grossman



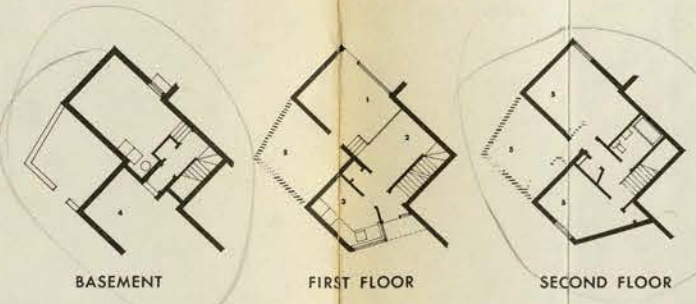
Units Type G2 and G1



Unit Type G6

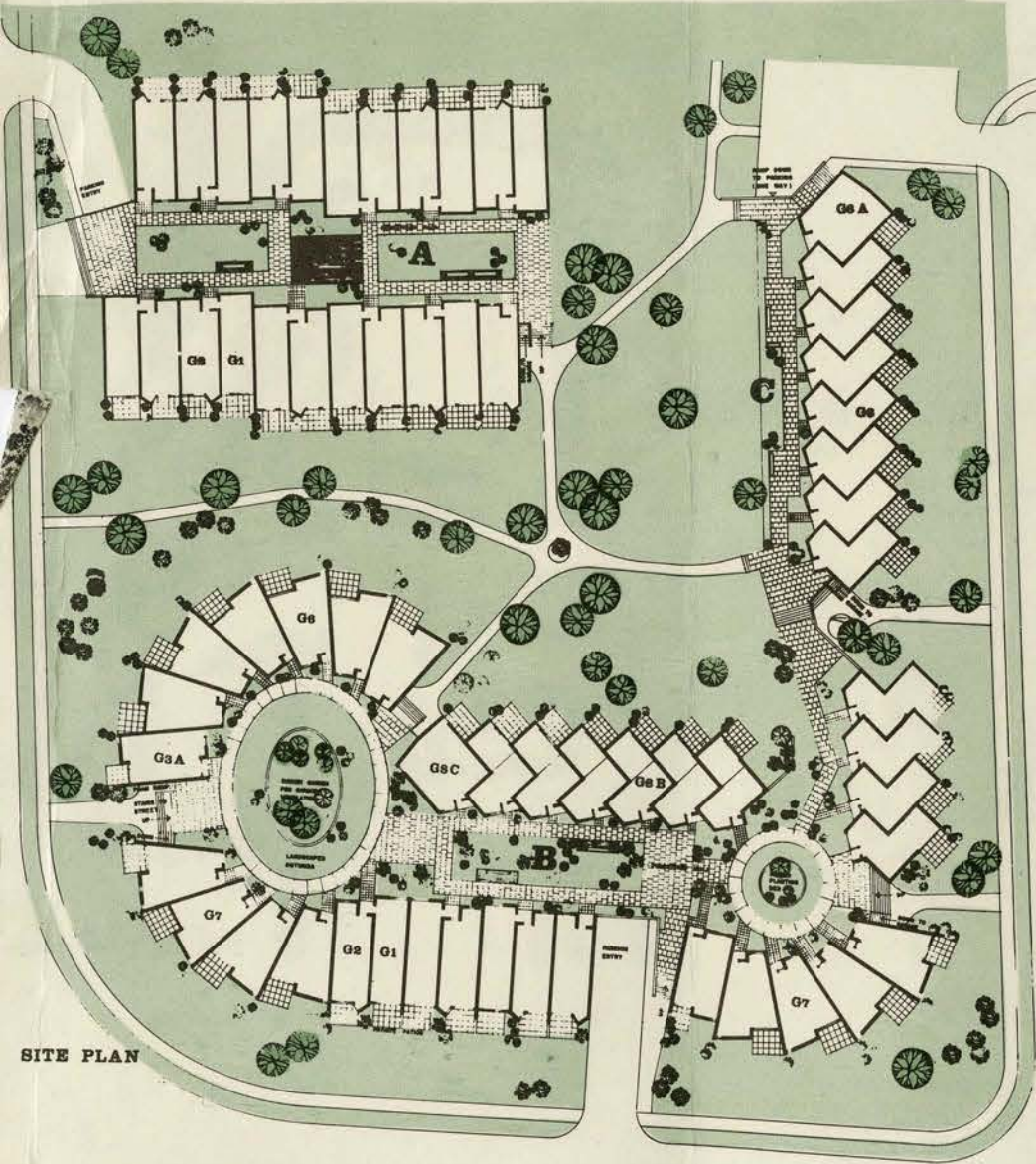
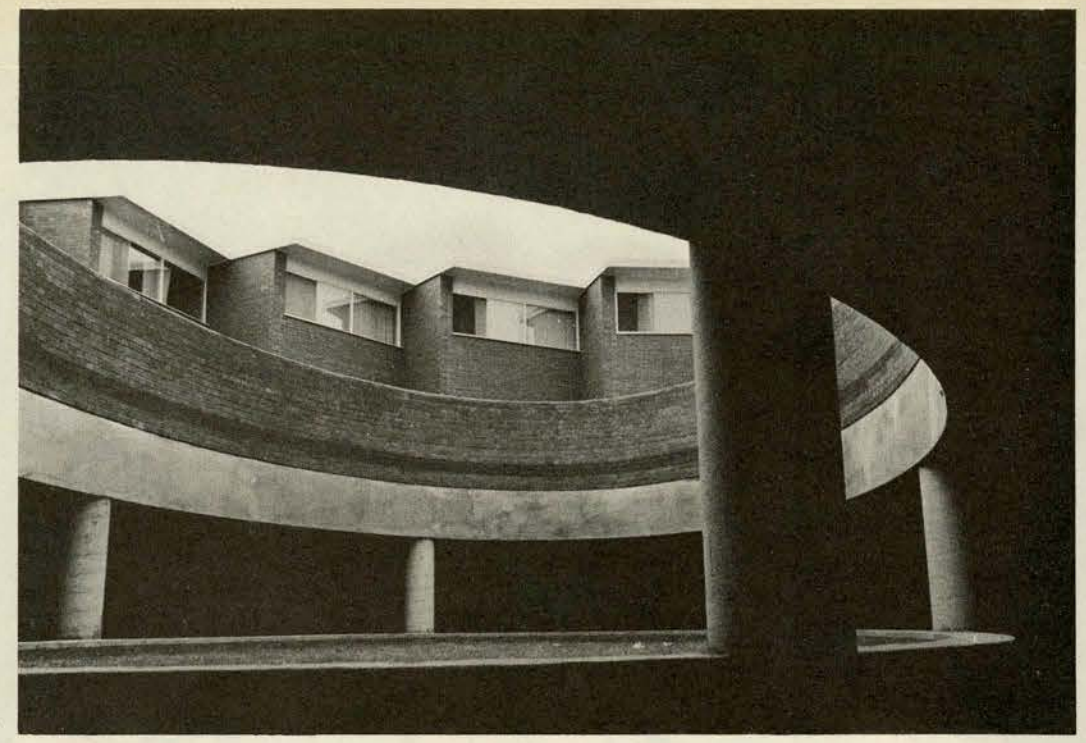


Unit Type G7

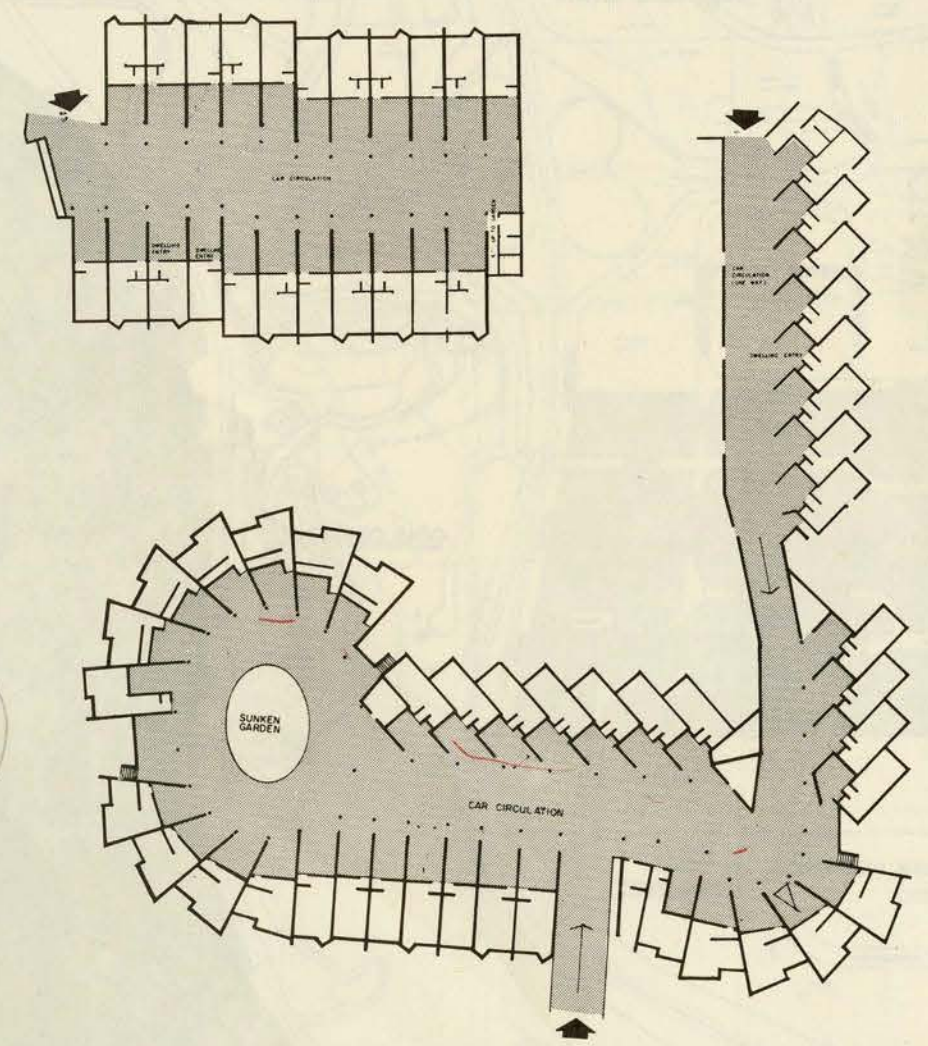


Unit Type G8-B derived from a standard 12' module, except 'L' shape, to create diagonal dimension—dots indicate end unit, with additional bedroom (G8-C)

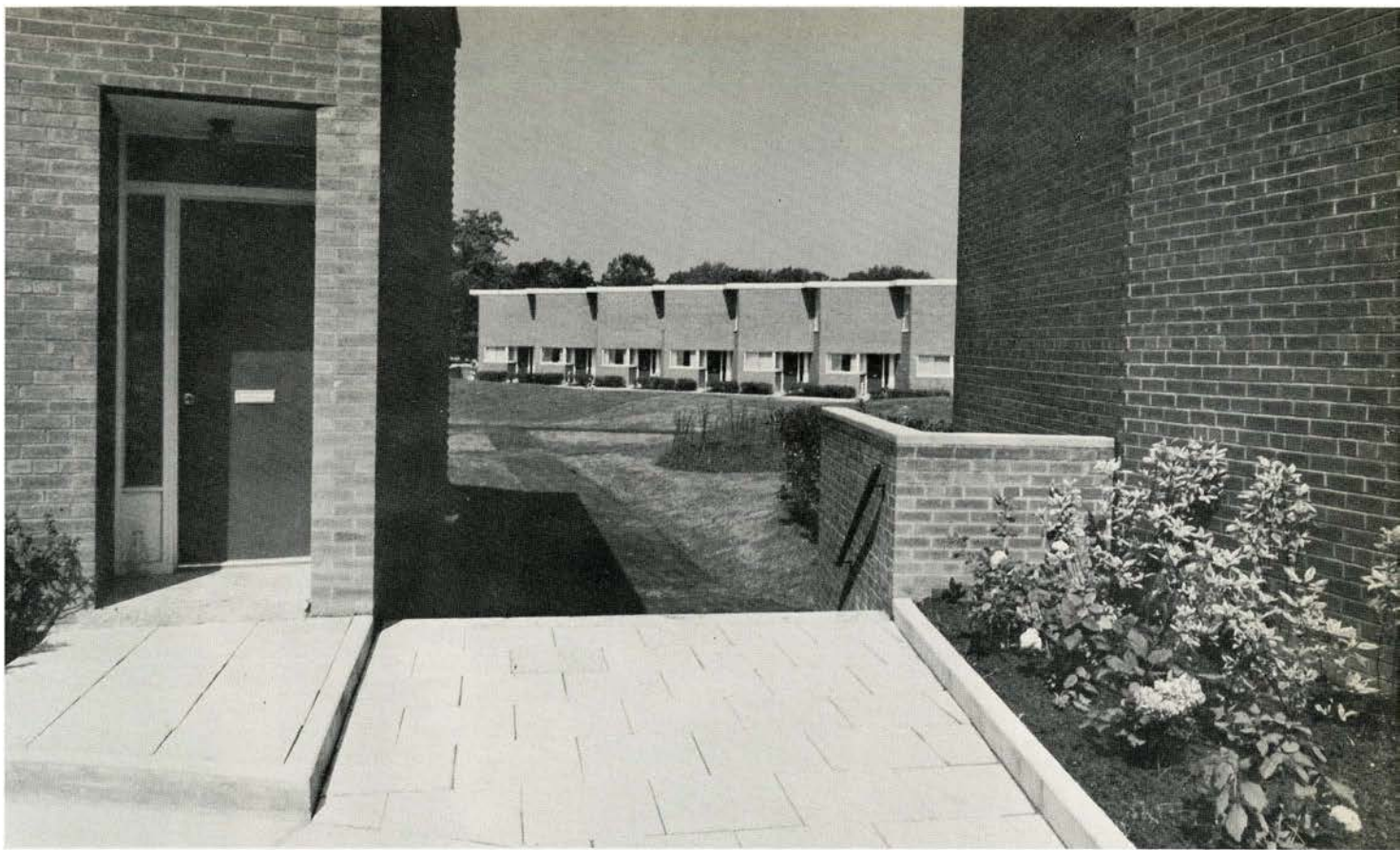
- LEGEND
- 1 LIVING
 - 2 DINING
 - 3 KITCHEN
 - 4 PARKING
 - 5 BEDROOM
 - 6 STORAGE
 - 7 AIRLOCK
 - 8 UTILITY
 - 9 ENTRANCE



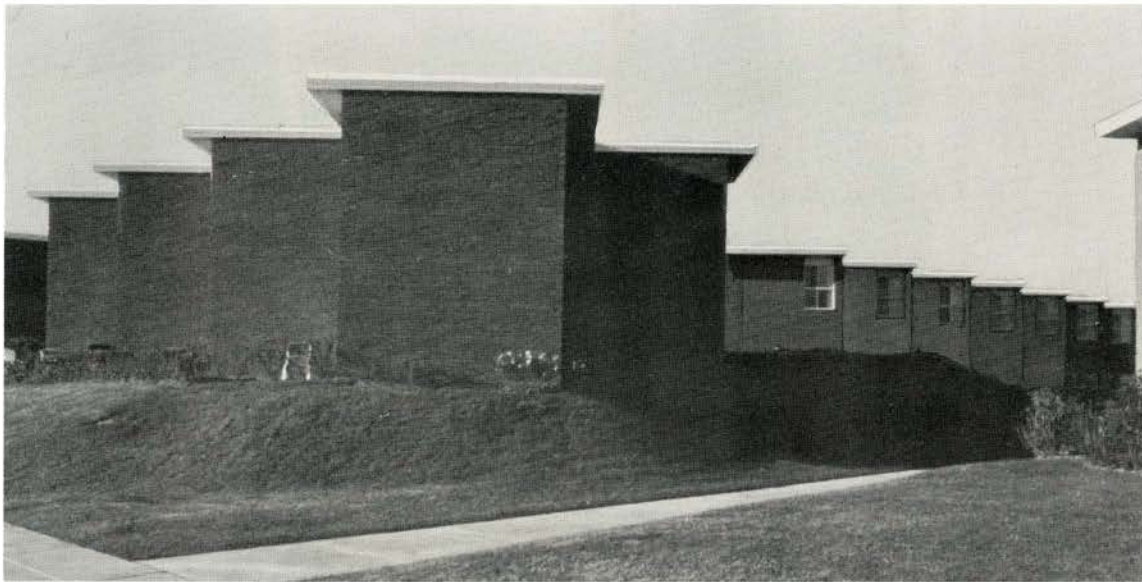
SITE PLAN



PLAN AT BASEMENT LEVEL showing car circulation with buildings 'B' & 'C' connected for one way traffic.



CLIVE CLARK



Above: View from rotunda towards central green. Left: Southeast portion of building B.

Below left: Entrance to pedestrian mall of building A, showing car entry below.

Below right: Typical living-dining room of unit type G2. The private terrace can be seen through the sliding glazed doors.

SEYMORE GREEN





Flemington
PARK





SEYMORE GREEN



BLOCK L-3. The first use of the linear concept of garden houses, with one unit type repeated. Various views show the projecting bay windows over the terraces, the pedestrian mall with its access to the gardens, the split-level living dining area, and the main entrance to the pedestrian and car circulation.

The term "garden home" has been used in an effort to accentuate the house-to-garden relationship, rather than the house to house connotation of the word row-house.

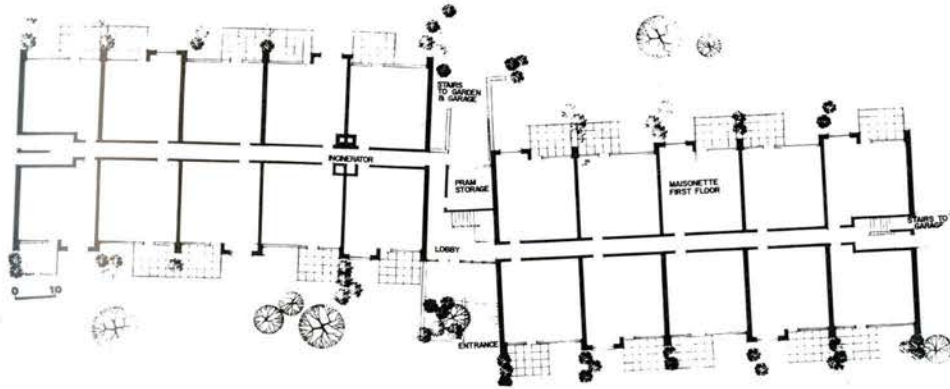


SEYMORE GREEN

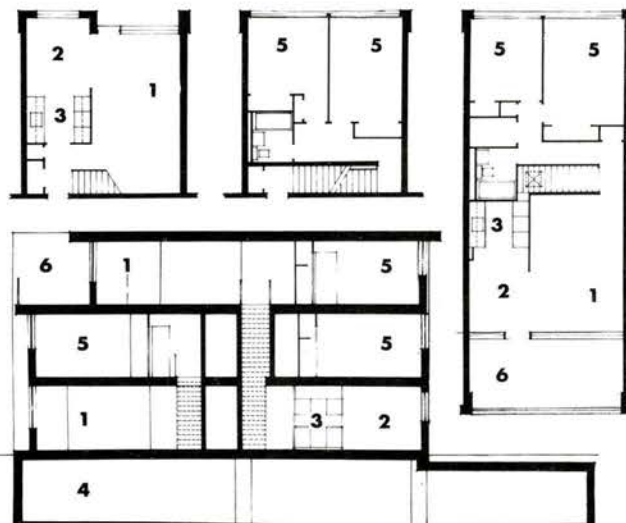
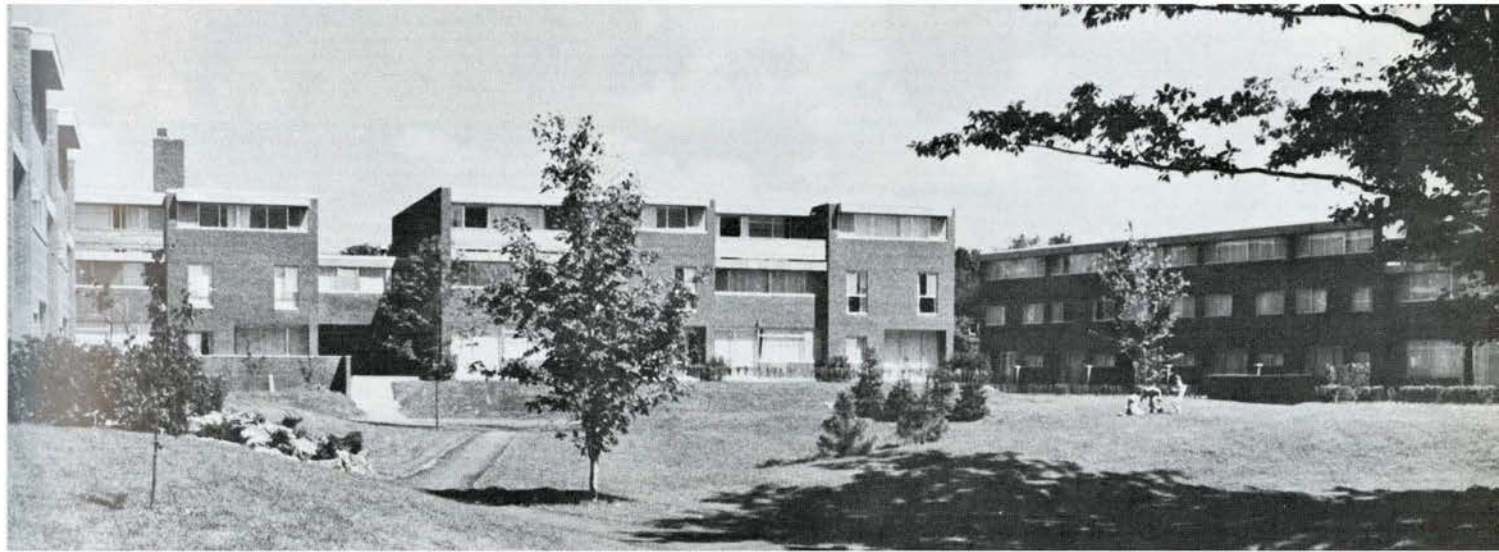


SEYMORE GREEN





Block H-6 consists of six, similar, 3-storey apartment-maisonette buildings. The ground floor plan of one building is shown at left. In their layout these form two open greens. The relationship of the top through apartment to the lower maisonettes is illustrated in the plans and sections. The interior shows the dining-living room of a typical through apartment, looking towards its private roof terrace.



Left:
Ground Floor

Centre:
First Floor

Right:
Top Floor
Through Apartment



SEYMORE GREEN



SEYMORE GREEN

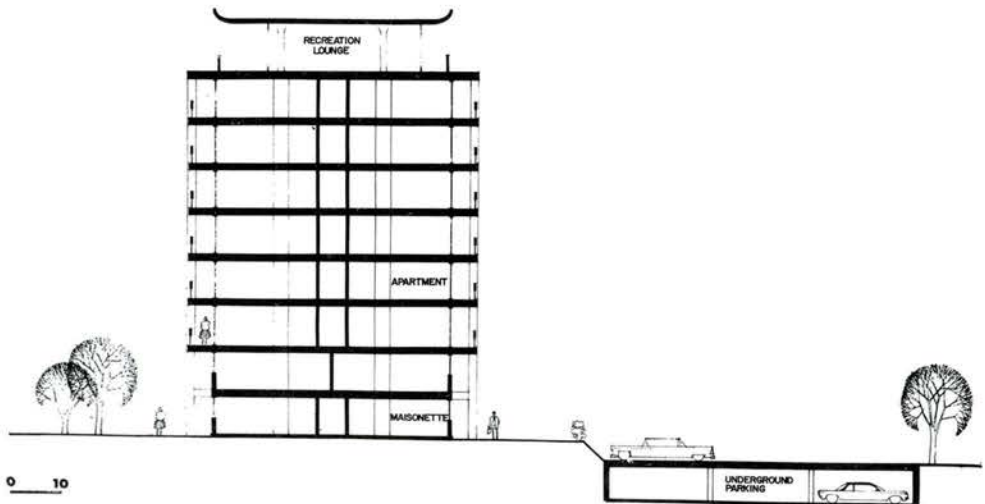
The eight storey reinforced concrete apartment building on block H2A.

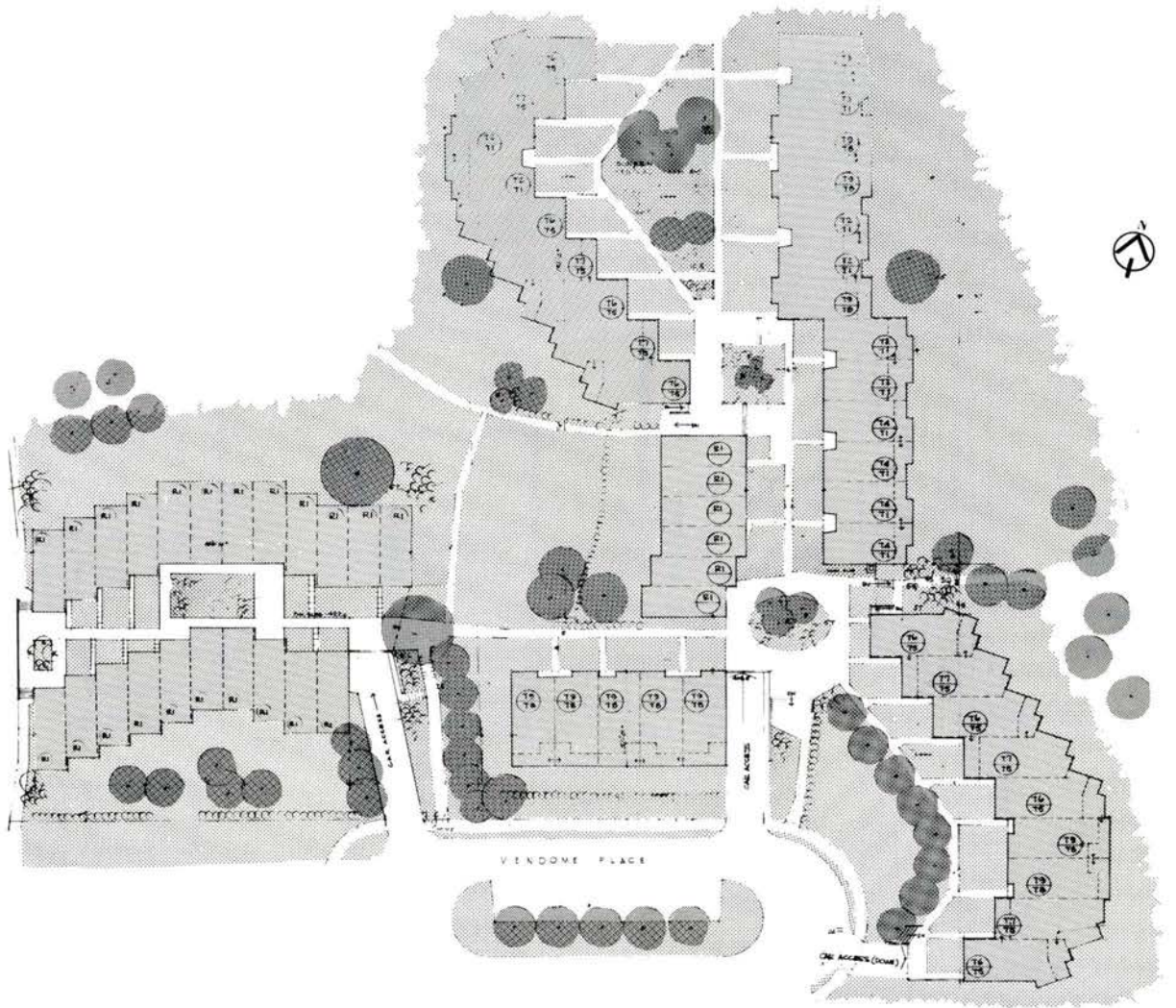
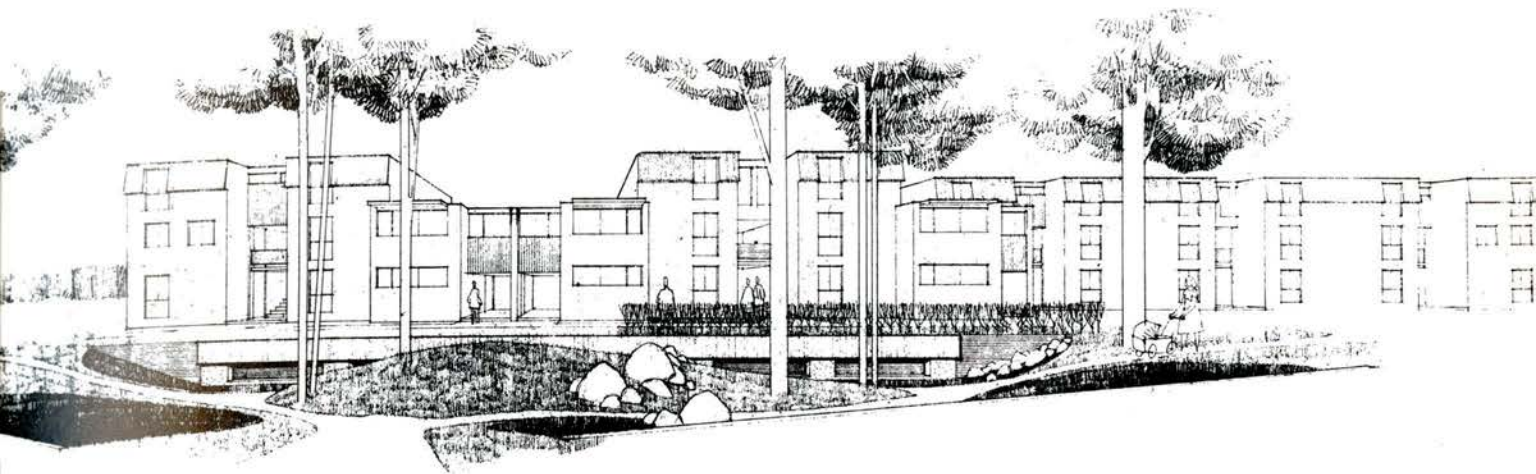
The lower two floors, which are illustrated in the section below, contain two storey maisonettes, similar to those in Block H6.

The penthouse structure is a recreation lounge which opens to a sun-deck for the tenants' use. This is the only building which, due to density, necessitated partial surface parking.



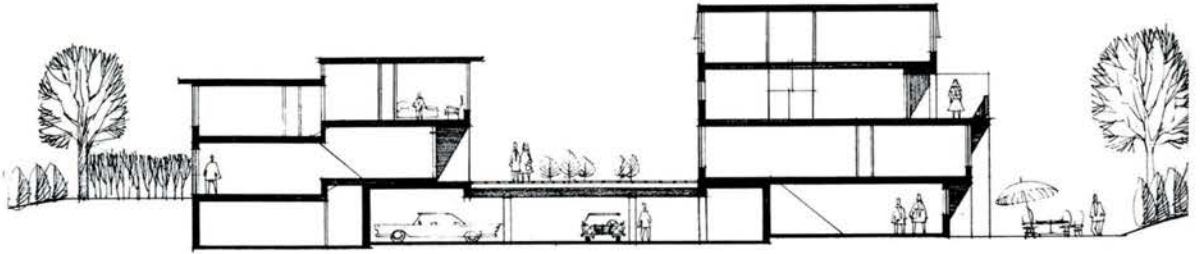
SEYMORE GREEN





THE SITE PLAN above is of blocks H3 and H4, which are presently under construction. H4 basically repeats the “garden homes” layout already built in phase 1.

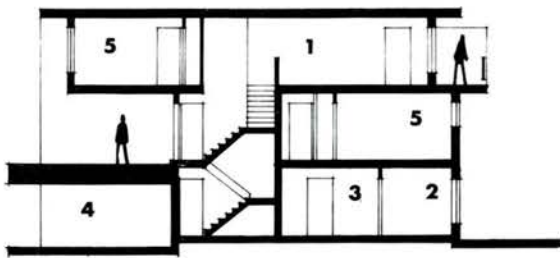
Block H3 mixes similar garden homes with a new terraced type of accommodation, consisting of self-contained dwelling units stacked one over the other. The perspective indicates these, as seen from the sunken green in the pedestrian mall.



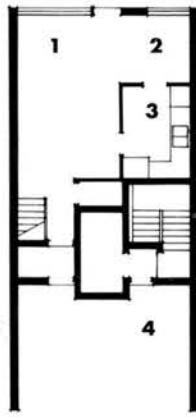
Row House Unit

Terraced House Unit

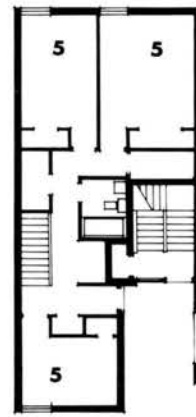
Section Through Street at R-1 Unit & T-2/T-1 Unit



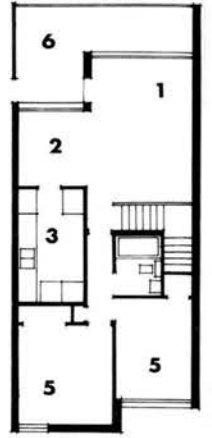
SECTION
THROUGH T8-T9



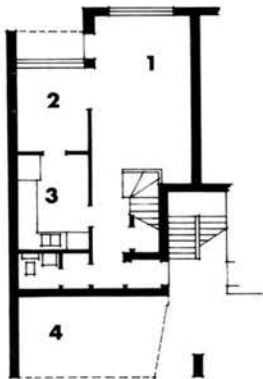
PARKING LEVEL



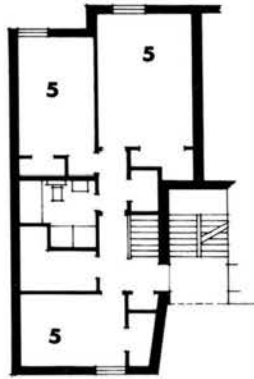
MALL LEVEL



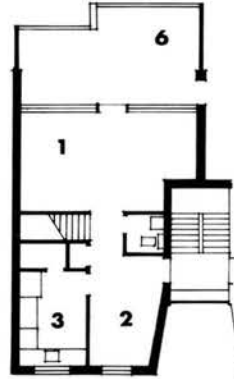
THIRD FLOOR
UNIT T9



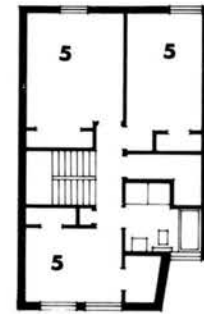
PARKING LEVEL



MALL LEVEL



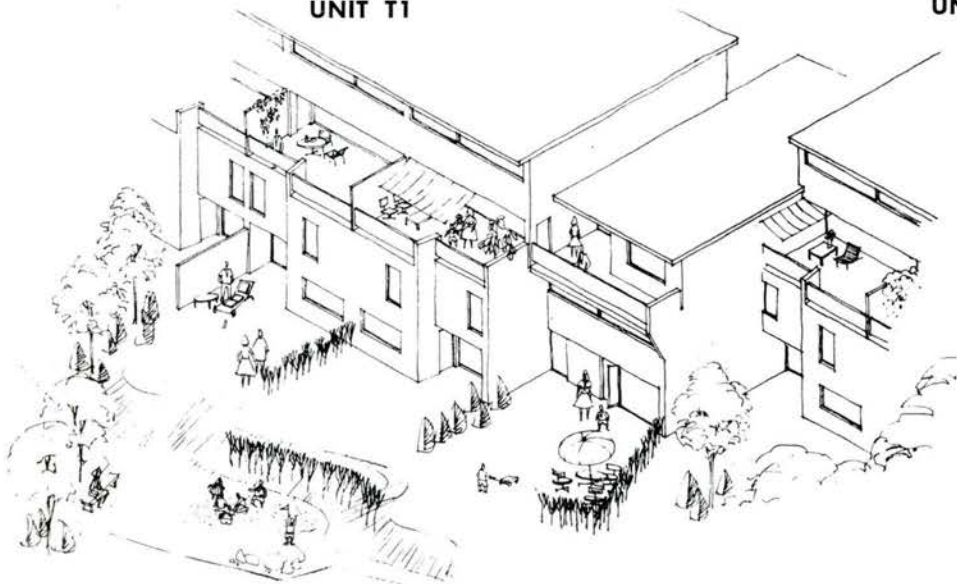
THIRD FLOOR



FOURTH FLOOR

UNIT T1

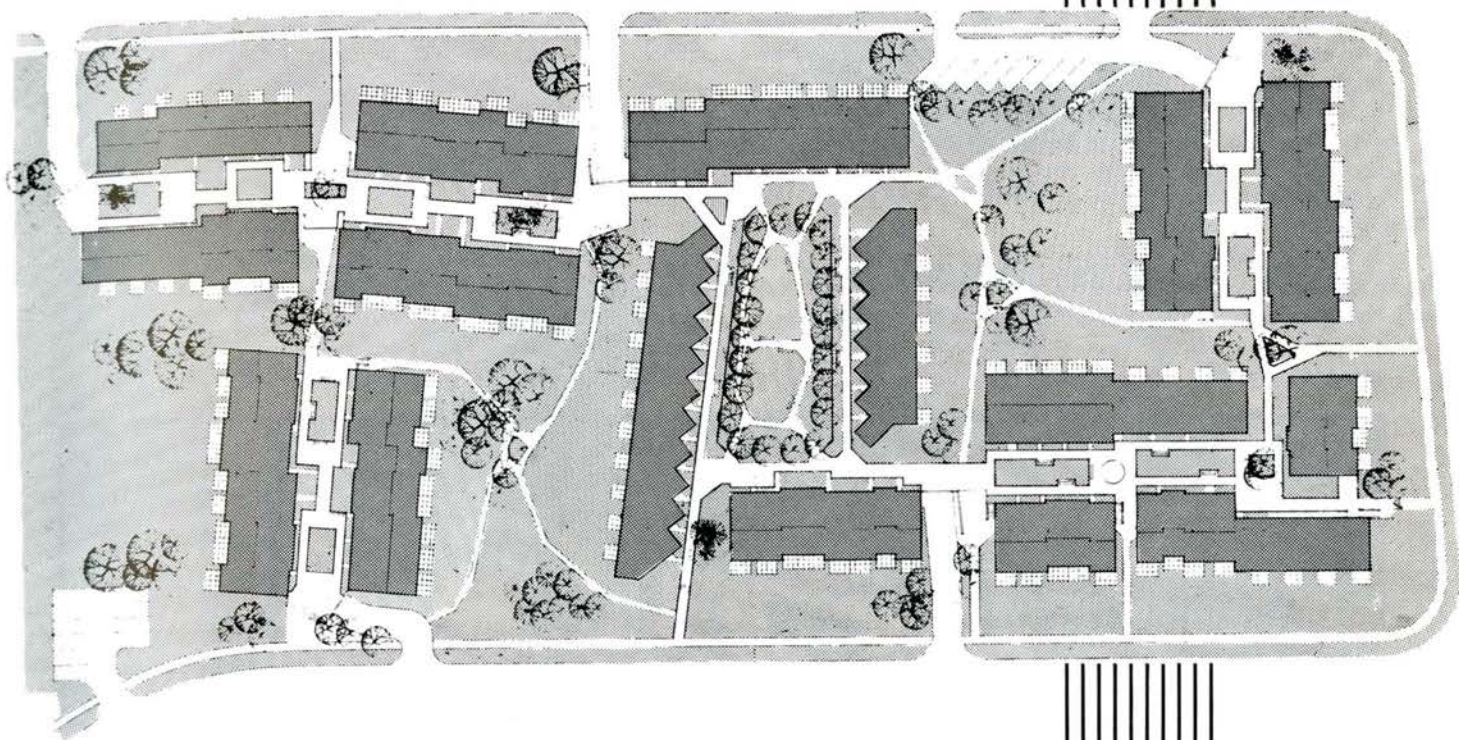
UNIT T2



View from garden showing terraced units, both three and four storey types.



SECTION
THROUGH T1-T2



BLOCK D3 shown above has been the largest single area available in the master plan, so far, for the development of garden homes. This site has permitted simplification of the 'street' system built on the smaller site. A person will be able to walk through the connected pedestrian malls for over 1500 feet, without encountering vehicular traffic. The central square, with its sunken garden, will be tree-lined. The traffic below it will be one-way.

This group, soon to be started, indicates the manner in which the linear 'street' concept can become a flexible tool for site development.

Flemington
PARK

City of Winnipeg

THE CITY OF WINNIPEG recently made application to the Federal Government for financial assistance for Winnipeg's first slum clearance project. The proposed re-development area is in the north-central section of the city and comprises approximately 50 acres. Most of the area is seriously blighted housing of all types although there is some commercial and industrial enterprises mixed in with the housing. Lack of proper planning and zoning in the past is quite apparent. The area is considered to be one of the worst in Winnipeg.

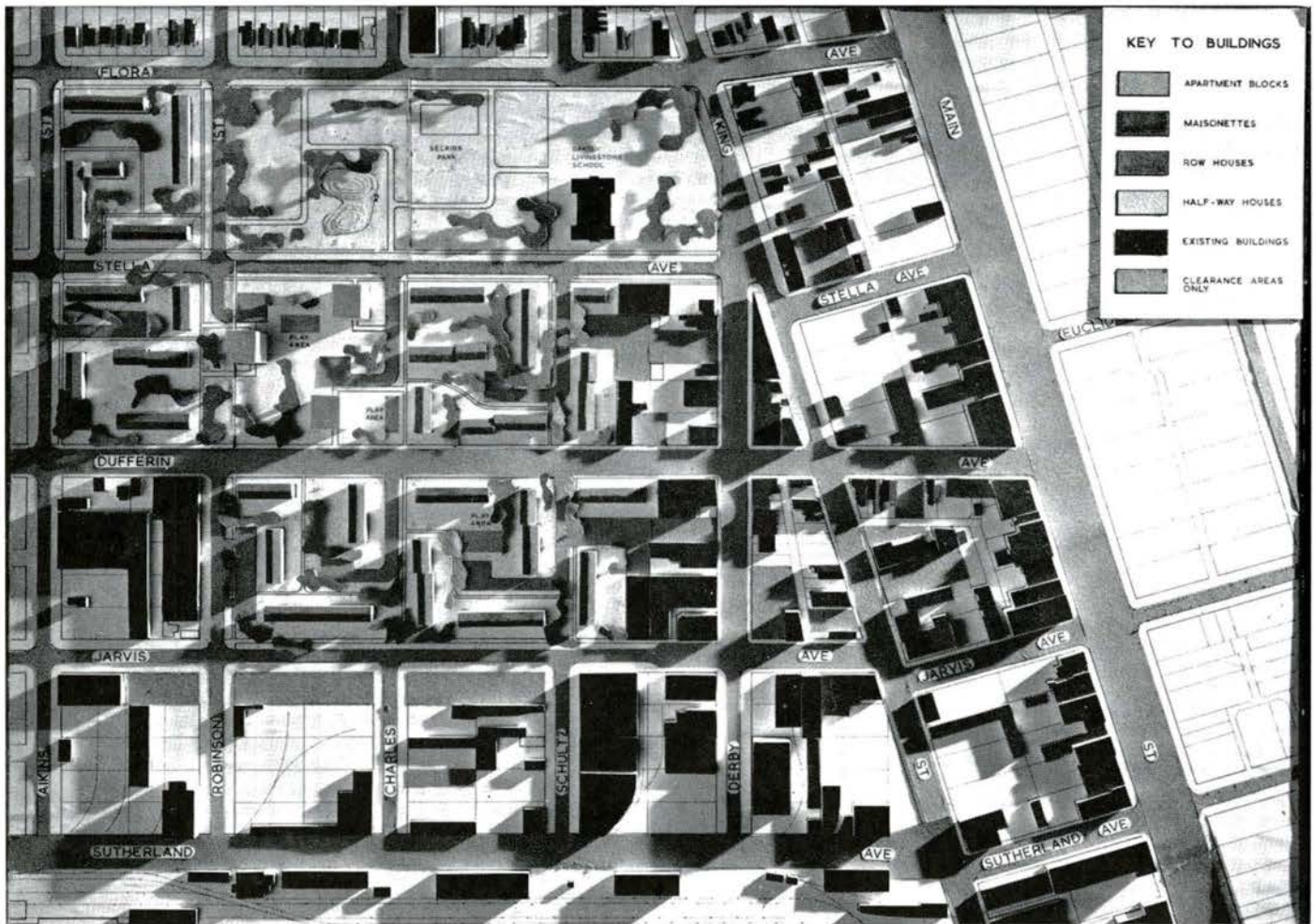
The proposed urban renewal will necessitate the acquisition and clearance of most of the 250 buildings now located there. After demolition it is proposed that the present street system be re-arranged and that future commerce and industry

be segregated from residential areas. A large portion will be required for a housing project under Section 36 of the National Housing Act. This new housing will provide 700 units in apartments, maisonnettes and row housing. In addition, the existing school and park sites will be enlarged. Approximately 15 acres will be set aside for private re-development expected to be mainly commercial and industrial.

It is estimated that the total cost of acquisition, clearance and re-development will be around \$15,000,000. This includes 165 dwelling units to be constructed on city-owned land in the northwest section of the city to provide alternate housing for the families to be displaced in the initial stages of demolition. It is expected that complete re-development will take from five to six years.

by
E. G. Simpson

Director
Housing and
Urban Renewal
City of Winnipeg

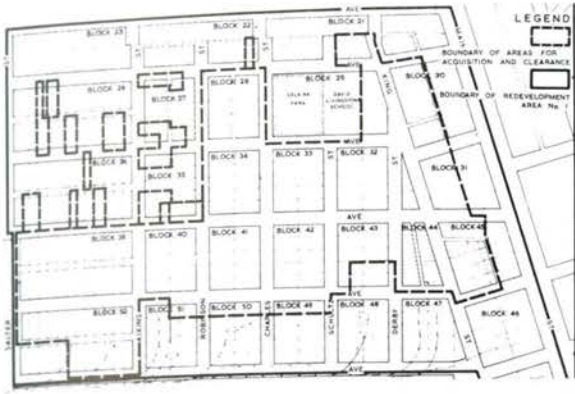


IN ORDER to measure the housing need and to gain information on existing social conditions, about 50 per cent of the families living in the proposed redevelopment area were interviewed. The interviews showed clearly that there is a group of people in the area whose condition cannot be remedied by improvement in housing conditions alone. Many of this group are seasonally employed or are unemployable and they live in undesirable surroundings. Until recently this group had been confined to an area on Jarvis Avenue, but the survey revealed that they are moving into the area north of Jarvis Avenue, a matter of concern to the families living there.

There is no doubt that this group of families could not be moved into new housing. Some older, adequate accommodation will be required to provide a "half-way house" where they can be under supervision and given the opportunity, instruction and encouragement to improve. Those who do

by
W. T. Haxby

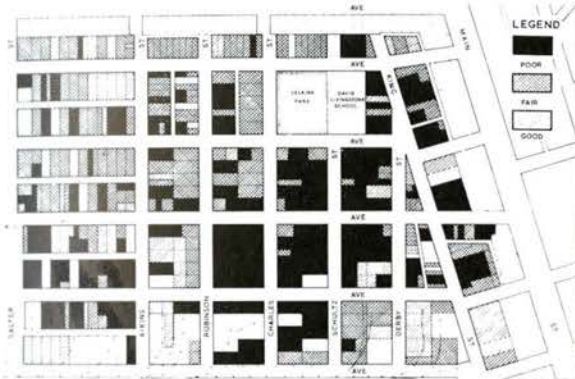
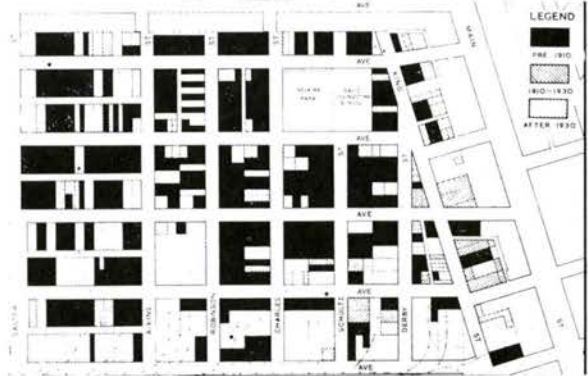
Senior Planner
Research
The Metropolitan
Corporation of
Greater Winnipeg



Acquisition and clearance



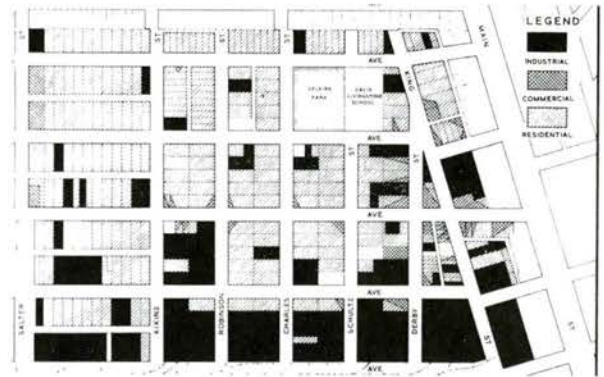
Age of buildings



Condition of buildings



Existing land use



Proposals for redevelopment

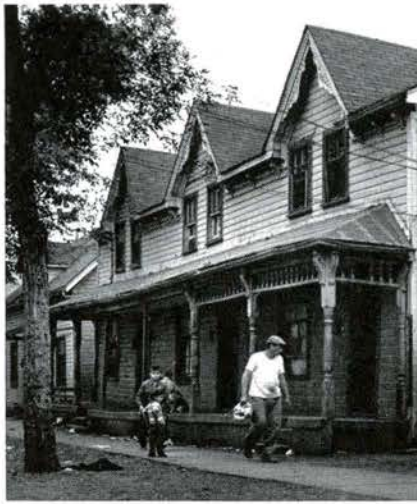
REDEVELOPMENT

improve can then be transferred to new housing where they will have opportunity for further improvement.

This proposal was endorsed by the Chairman of the Public Health and Welfare Committee, Alderman Edith Tennant, who said that at least someone had had the courage to put into writing what she had long believed was the case.

It is the intention, therefore, that in redeveloping the area to be cleared, that Block 28 bounded by Stella and Flora Avenues, Robinson and Charles Streets, should be cleared at the end of Stage 3 of the Redevelopment program and used as an extension to the existing park.

There are, in this block, a number of houses in fair condition and these it is hoped, will be taken over by the Housing Authority and used to re-house the group of people that cannot



This Carpenter Gothic row house typifies the wood frame construction so prevalent in the area. Note the unprotected electrical service stapled to the wall beneath the eaves



Writing on the wall — people leave their mark on their environment and the environment leaves its mark on them



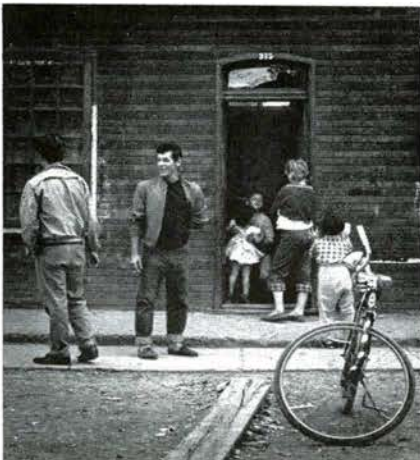
The Planner's real clients

be immediately transferred to new public housing. We can visualize that it will be three to five years before the end of Stage 3 of the program is reached and this gives us reasonable time to do something about these people. The problem, of course, may not be so large when actual clearance and redevelopment gets under way, because these types of families have a habit of disappearing into other parts of the city. Furthermore, some of them may find the going too tough if they are to be under close supervision and they may get out of the half-way houses before completing the course. Nevertheless, I believe this has been tried in the United Kingdom and found quite successful. We can always give it a try here.

The Welfare Authorities are going to have another problem on their hands with a great deal of the furniture, bedding and personal belongings of these families. Much of the furniture and bedding that these people now own could not be taken into new public housing nor into the half-way houses. Many of the families are unemployed or are on Public Welfare and I doubt whether they will be financially capable of replacing it. The problem is not unsurmountable but just another of the headaches associated with relocation.

One thing is certain. With the relocation program that we have developed, these families will need very careful handling and sympathetic treatment.

What's their future?



Playground scene

Photography by Henry Kalen

GOLD MEDALLION

“ALL-ELECTRIC HOME”

COMPETITION

REPORT OF THE JURY

IN general the jury was disappointed with the number of entries (17) and the standard of submissions.

Several very worthy entries had to be rejected for serious breaches of mandatory regulations. Two entries in particular were most ingenious, imaginative and well thought out but exceeded the area limitations. Several entries did not even come up to the minimum “gold medallion” electric standards.

First Prize is awarded to entry No 10 for the following reasons:

Orientation is considered excellent; while the jury recognizes the extravagance of 2 separate garages, both need not be built initially and they provide a means of obtaining a pleasant and private front court. The design was commended for the compactness of plan and economical framing. The electrical features were generally of a high standard.

Second Prize is awarded to entry No 1.

Orientation and siting are good. Plan is highly commended for its spaciousness and compact core. Criticized were some construction details. High standard electrically.

Third Prize is awarded to entry No 12.

Has an interesting approach and a plan with good separation of functions and a pleasant living room. Criticized are smallness of bedroom; openness between kitchen and living room and lack of imaginative treatment of hallway: this submission was rated highest of the three prize winning designs for electrical features.

Of the three special awards, all were imaginative solutions. The jury was most impressed with the integrated landscaping and interesting plan of entry No 7. Entry No 4 received the highest rating electrically. The heaviness and prominence of the car port was felt to be a great drawback in an otherwise excellent plan. Entry No 9 is an imaginative two storey solution but with several weaknesses in plan.

Mr. W. L. Scott and Mr. J. I. Thompson rendered invaluable service in assessing the electrical aspects of the submissions.

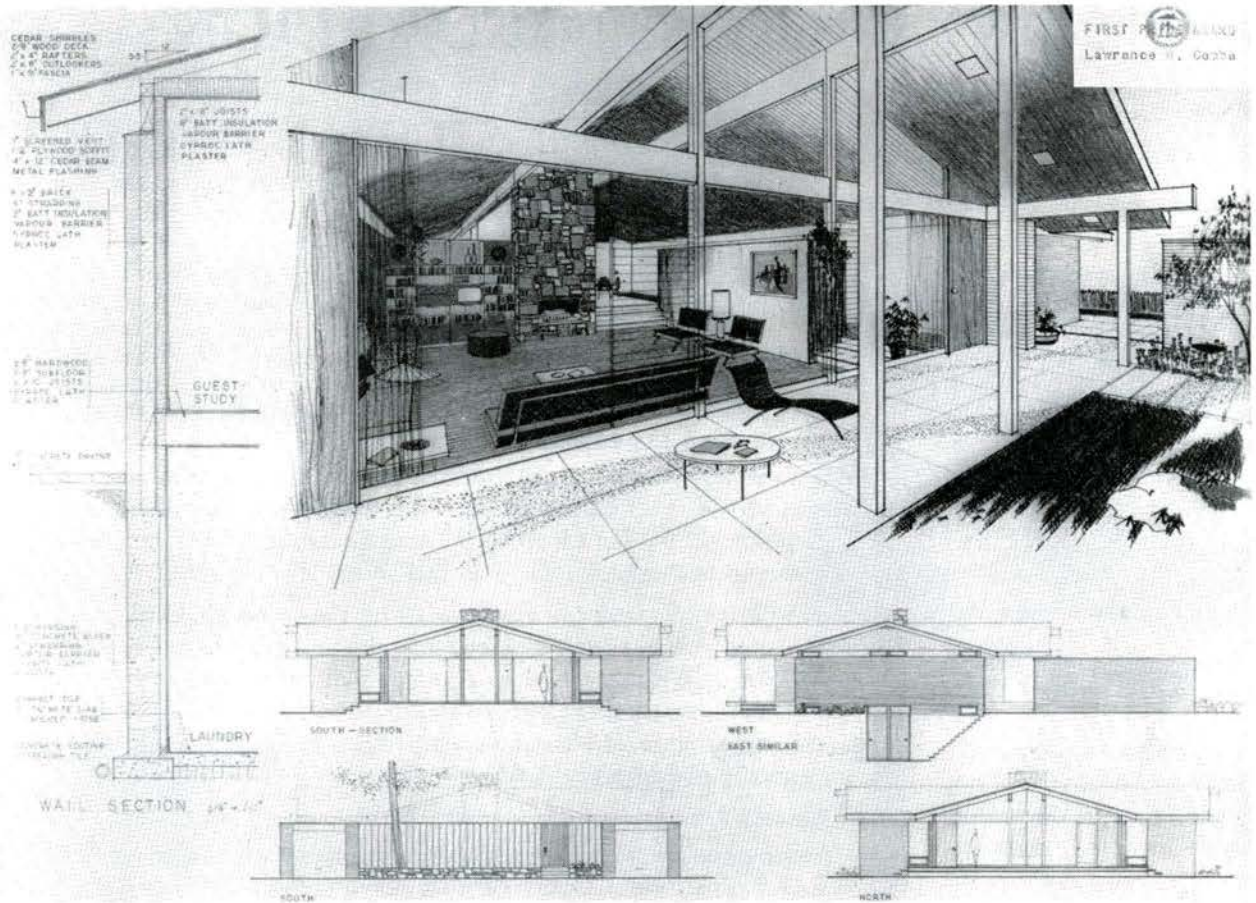
The Jury:

G. D. Gibson (F), Mrs Pamela Cluff, Kenneth H. Candy

Winners

<i>1st Prize</i>	<i>Entry No 10</i>	<i>Lawrence W. Combe</i>
<i>2nd Prize</i>	<i>Entry No 1</i>	<i>John Mu</i>
<i>3rd Prize</i>	<i>Entry No 12</i>	<i>Donald G. Hallford</i>
<i>Special Mention</i>	<i>Entry No 4</i>	<i>Richard Y. Lee</i>
<i>Special Mention</i>	<i>Entry No 9</i>	<i>Harry L. King</i>
<i>Special Mention</i>	<i>Entry No 7</i>	<i>George J. Yamazaki</i>

Endorsed by the Ontario Association of Architects, the competition was open to all members of the Association practising in Ontario, and attracted registration from 83 architects. The objective of the competition was the design of “ideal homes” created specifically for total electric living in Ontario, and designs met the electrical industry’s Gold Medallion standards, including electric heating.



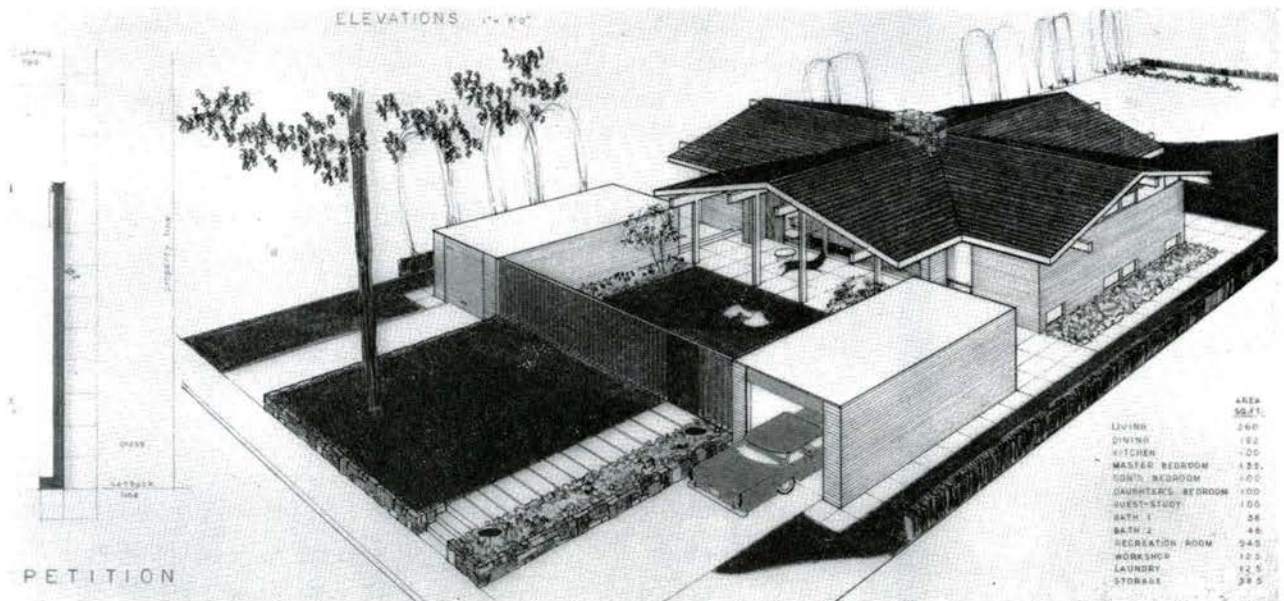
ELECTRICAL FEATURES — An electric forced-air furnace, with the fan unit in the basement storage room connected to a duct system, has supplementary in-duct heaters. Temperature is controlled by individual thermostats in each room.

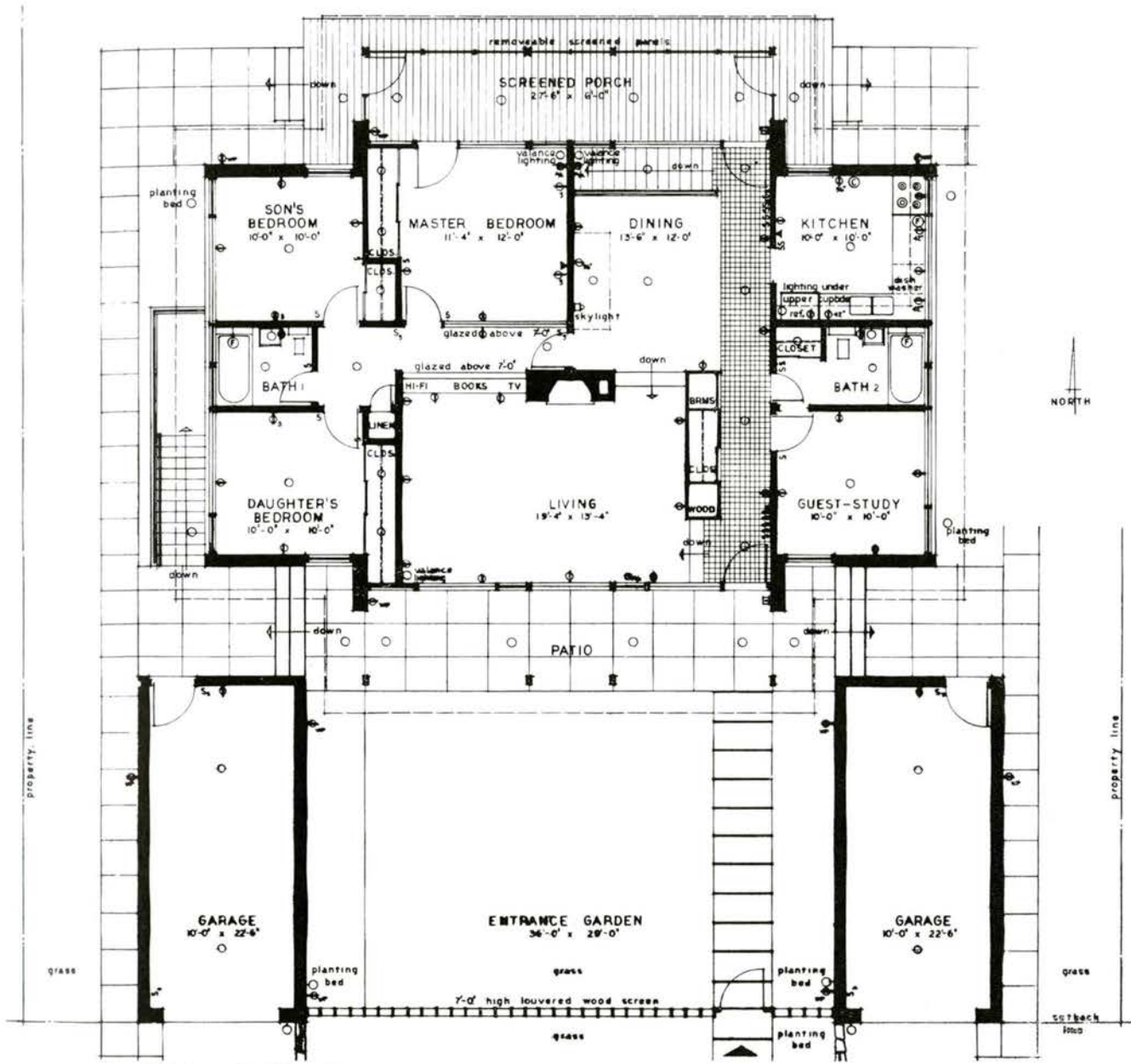
General illumination in the living room, dining room, and master bedroom is provided by a continuous valance, open top and bottom, lighting the drapes below and the open glass and wood ceiling above. The skylight in the dining area has lights within for night illumination.

Exterior lighting of the entrance court comes from flood lights in the eaves of the house. Waterproof outlets for mushroom type lighting fixtures are located in the planting beds beside each garage.

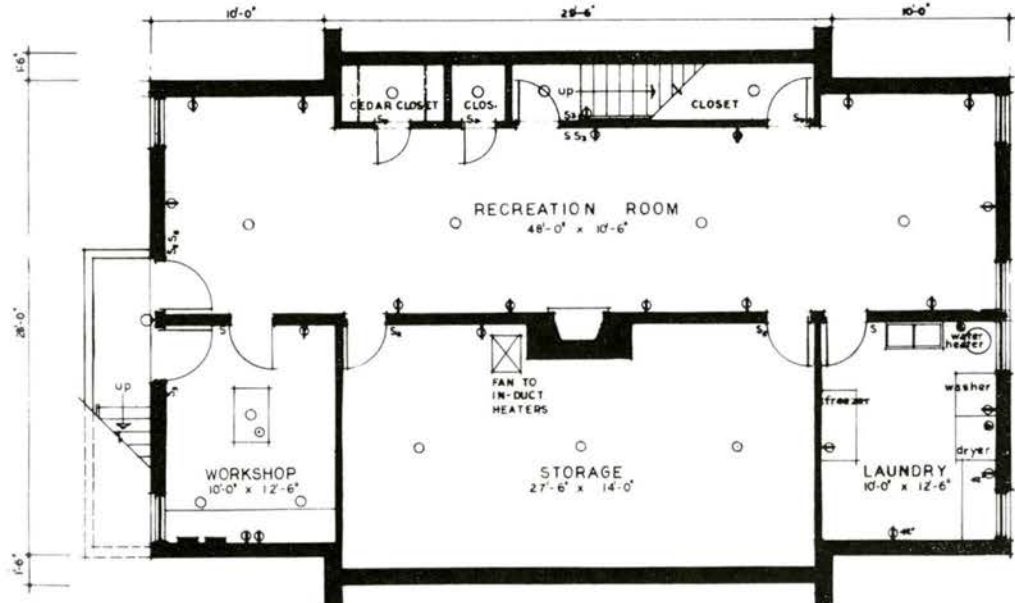
In the living room, the built-in cabinet beside the fireplace encloses a stereo high-fidelity system with record player, FM radio and tape recorder. The television set is also built into this unit.

Provision has been made in the kitchen for range, refrigerator and dishwasher, together with adequate outlets for portable appliances. Continuous lighting under the upper kitchen cupboards illuminates work areas.





GROUND FLOOR PLAN 1" = 4'-0" GROSS AREA 1503 SQ. FT.



BASEMENT PLAN 1" = 4'-0"

Apartment Land Appraisal

by J. Berman

This article has been written to give architects some guide regarding the economic problems affecting building and land development which so often are basic considerations in the design of housing projects.

PERHAPS the maxim "look before you leap" is overworked. Yet, in the process of land purchase, there are many apartment builders who regret that they did not obey this dictate. This is not to assume that even the most cautious do not suffer from a mistaken move. It does, however, legislate a procedure which minimizes the margin for error.

There are a series of factors which should be considered before apartment land is bought. While the sophisticated purchaser is not always formally aware of the system, the check list does exist. Some very significant projects were put into work by what is fondly called "intuition". The writer feels that the intuitive builder is one who has his check list in his head.

What then, are the prime considerations of apartment land purchase? Let us examine them on both a short term and long term basis, since an offering may qualify on a limited time basis, but may be disqualified on a long term analysis, or the converse.

This study before purchase is one that should be conducted by the builder with his architect. In fact, in important projects it is difficult to know how this procedure could be handled without the architect, whose knowledge of local zoning regulations and exposure to the type of calculations required, makes his assistance imperative.

SHORT TERM ANALYSIS

Competition — a neighbourhood survey is conducted to determine —

- (a) The rent structure and level of rent cost for all types of accommodation.
- (b) The size and quality of suites presently available and in what quantity.
- (c) The plan of suites.
- (d) The amenities associated with each offering (lobby detail, locker accommodation, landscaping, parking, etc.).
- (e) The stability of tenancies and rents.
- (f) The total number of rental units in the immediate area.
- (g) Availability of shopping, schools, churches, transportation and public recreational facilities.
- (h) Availability of mortgage financing at reasonable terms.
- (i) Competitive land costs.

The Zoning

If the environment appears satisfactory, the next examination is whether the land in question is so zoned as to yield the proper number of suites of the proper size for a satisfactory rent roll.

The Architect:

- (a) Examines the square foot area of the land.
- (b) Knowing the floor space index, determines the bulk of the building.
- (c) Within this framework, creates the suite yield as dictated by the area survey as to size and relationship, one type of accommodation to the other.

The Financing Result

The architect having reported his findings, the builder then must analyze the cost of structure, the amount of

mortgage financing available, the amount of cash investment involved, and as a final figure the percentage yield on his investment.

Example: (suburban location)

Building containing 100 suites consisting of —	
50 One-bedroom suites	600 sq. ft.
35 Two-bedroom suites	800 sq. ft.
15 Three-bedroom suites	1000 sq. ft.
50% underground, 50% surface parking	
Estimated Costs (based on previous experience)	
Land	\$ 120,000.00
Construction — 100 suites	850,000.00
Equipment	50,000.00
Land Improvement — paving and landscaping	50,000.00
Fringe Costs — overhead mortgage financing expense, legal, promotion, leasing	80,000.00
Total Cost	1,150,000.00
Mortgage Available	880,000.00
Cash/Equity required	270,000.00

Profit & Loss Pro Forma Statement

Total Rent Roll	165,000.00
Operating Cost—\$500.00 per suite	50,000.00
Mortgage repayment	
Principal and Interest	75,000.00
	125,000.00
Net Cash Flow (or 14.8% on equity)	40,000.00

The return, if achieved, makes it possible to sell the building should it be so desired, to provide an investor with a reasonable return on *his* investment, and give the builder a development profit. The profit and loss analysis also enables a calculation to be made which will indicate the "break-even point". This computation shows how much the rent roll can drop and still meet all expenditures, and also the extent of the vacancies that can be tolerated before the expenditures exceed income. Having qualified the project on a short term basis, the builder still must be satisfied that the long term requirements for stability are met by the specific environment of the deal.

LONG TERM ANALYSIS

Competition

The survey mentioned before must also indicate that there is a margin of safety in terms of the *total* possible production of suites in the neighbourhood. This, however, must be relative to predicted long term populations, increment or loss, according to overall trends.

Real Estate Values

These values flow from the competitive condition above, but also from changes, up or down, in the general nature and environment of the neighbourhood, viz: public transit routes, express roads, railway lines, airport enlargement, parks, greenbelt, etc, some of which, of course, are unfortunately not predictable without a Master Plan.

Obsolescence

It may occur that the size, dimensions and topography of a parcel of land dictate a structure more susceptible to obsolescence than other buildings in the area, *eg*, a long narrow building presently acceptable but ultimately so unattractive as to cause a flow of tenants to other accommodation.

CONCLUSION

The normal hazards of competition and unforeseen conditions exist in the building industry as in any other undertaking. It must, therefore, be repeated that even the above approach to land purchase does not preclude the possibility of failure. It does create a better climate for success.

The Report of the RAIC Committee of Inquiry Into Design of the Residential Environment

ACHIEVEMENTS OF THE INSTITUTE'S TEN-MONTH IMPLEMENTATION PROGRAM

The Meaning of the Word "Implementation"

THE CONCISE OXFORD DICTIONARY informs us that "to implement" is to "complete a contract" or "fulfil an engagement". The word "implementation" has become familiar in the daily language of those architects who have knowledge of the steps leading up to the writing of the Residential Environment Report, and the recommendations it produced in 1960.

It will be recalled that the RAIC Committee of Inquiry triumvirate of Peter Dobush, John C. Parkin, and C. E. Pratt submitted their lively and provocative report to the Government and the profession at the Winnipeg Assembly in June of last year. Delegates to the 53rd Annual Convention were impressed with the potential impact of the report upon urban Canada, and immediately resolved that the RAIC should act to "implement" the 32 recommendations in the report.

Sixteen months later the RAIC considers that those who contributed time and money to at least a partial fulfillment of the report's recommendations should be given a full accounting on precisely what has been accomplished.

The contents of this summary of Residential Environment report implementation contain details of the progress made on many fronts as a result of the pioneer journeyings made by Messrs. Dobush, Parkin and Pratt during the winter of 1959-1960.

However, I should like to single out for special praise the unremitting work of the RAIC-CMHC Committee on Housing, which met at Ottawa on seven separate occasions from July 1960 to September 1961, in directing the work of implementation. The Committee was comprised of James Murray, Toronto, (Chairman); James Strutt, Ottawa; Ian Maclellan, Ottawa; Humphrey Carver, Ottawa; John Bland, Montreal; and latterly, Andrew Hazeland, of Ottawa. The Institute recalls with appreciation the noteworthy contribution of Alan Armstrong as Committee of Inquiry Secretary.

The directing influence of the Committee gave stimulus and support to the administrative accomplishments of Edmund Fox, whom we borrowed in October 1960 from Central Mortgage and Housing Corporation, and have regretfully released to his new responsibilities in the Corporation.

I also acknowledge with thanks the excellent efforts of the many architects in all corners of Canada, who, without obligation, sent cheques to the RAIC in the autumn of 1960 to a total of \$12,500. These funds have made possible a sustained implementation drive over ten active months.

Finally, it is my pleasure to acknowledge with gratitude the valued advice and co-operation given by Stewart Bates and his officers in Central Mortgage and Housing Corporation over the entire period since the creation of the Joint Housing Committee in 1958, during the searchings of the Committee of Inquiry, and, finally, in the course of implementing the Report.

It is my deep conviction that the contribution of the Committee of Inquiry in producing a valuable document to guide new growth in urban Canada represents only a beginning to creating a new awareness in all of us that the whole structure of our urban society must be continually re-examined and reassessed if we are to be equal as architects and as citizens to the challenge of tomorrow.

Harland Steele, PRAIC

*A foreword by
the President RAIC
and Reports by
Mr Edmund Fox,
Special Assistant,
Inquiry Report
Implementation
and
Mr J. A.
Murray (F),
Chairman,
RAIC-CMHC
Joint Committee
on Housing*

Report of the Special Assistant on Inquiry Report Implementation

THE FOLLOWING REMARKS are in the nature of a final report on my activities as Special Assistant, Inquiry Report Implementation, in the matter of carrying out a program established by the RAIC-CMHC Joint Committee on Housing to further the recommendations in the Report of the Committee of Inquiry into the Design of the Residential Environment.

Implementation Program:

It is known, of course, that the Committee of Inquiry Report was referred to the RAIC-CMHC Joint Committee following its acceptance, in principle, by the Royal Institute at the 53rd annual assembly in Winnipeg in June, 1960. The RAIC-CMHC Joint Committee met on separate occasions in July and September, 1960 for the purpose of formulating a specific program of action to give effect to the Report recommendations.

Resulting from the program established by the Joint Committee, the RAIC Executive Office undertook in October, 1960, to acquaint the various public and private agencies with recommendations addressed to them. At the same time, the Institute launched a financial campaign within the architectural profession to obtain an amount of \$15,000, which it considered necessary to carry out the program, as a separate operation, for a period of one year. On November 14, 1960, I was appointed Special Assistant on staff of the Institute, on loan from CMHC, to administer this program.

The first task was to complete the initial contact with many of the agencies addressed in the Report. These agencies included federal, provincial and local governments, Central Mortgage and Housing Corporation, the National House Builders' Association, the Town Planning Institute of Canada, heads of schools of architecture, provincial architectural associations and others.

Liaison With Organizations and Individuals:

Subsequent to the initial communication with these many organizations, arrangements were made for meetings and conferences with various groups to jointly discuss possible measures in carrying out certain of the Report recommendations.

In January, 1961, I visited Winnipeg to review with representatives from the Architectural Associations of Manitoba, Saskatchewan and Alberta, action which could be taken with respect to recommendations having a regional or local significance. In February, a further conference took place in Halifax which was attended by representatives from the Nova Scotia Association of Architects and the Architectural Association of New Brunswick.

In the fall of last year the Ontario Association of Architects undertook positive steps to deal with recommendations which had been referred to the provincial associations by establishing a separate committee of representatives from the OAA and from the house building industry in Ontario. The principal objective of this committee was to review and discuss matters of mutual concern between architect and builder. Following a series of meetings of this committee, the OAA then spon-

sored the establishment of a larger committee entitled "The Ontario Committee on Community Design", which included as members persons from a variety of organizations within Ontario whose activities had a direct influence in fashioning the residential environment. This committee is concerned generally with developing a higher degree of cooperation among the organizations in the business of building and planning communities, and also in taking action to promote better community design.

It will be recalled that the Province of Quebec Association of Architects sponsored a one day conference on December 7, 1960 to which were invited delegates from organizations both within and outside the Province of Quebec. It was hoped that from this conference would come a wider understanding and appreciation of the many problems to be met in improving the residential environment.

More recently the PQAA has published a document in English and French, containing all the material arising out of the December 7th conference, including the addresses of the principal speakers, summaries of seminar discussions and resolutions which were presented in the plenary session at the end of the conference. It is hoped that this document will serve to stimulate and maintain a continuing interest in problems of residential design in the Province of Quebec.

Special Projects

During the past ten months a number of special undertakings were initiated by the RAIC to further particular recommendations and to acquaint the public with the very real problem of providing a suitable environment for a rapidly growing Canadian urban population.

(a) *Publicity:*

From time to time, articles were published in the RAIC Journal and other periodicals recording progress with the implementation program, both nationally and within the various provincial associations. In March of this year, letters were sent forward to service clubs across Canada advising them of the availability of architects to address their members on the subject of the design of the residential environment. The response to these letters was quite satisfactory, particularly in the provinces of Ontario and New Brunswick. As a result of this campaign approximately twenty-five separate talks were given by members of the Royal Institute to service clubs during May and June. Press coverage in daily newspapers has also been quite extensive during the past ten months, with press comments and editorials being written on the various aspects of the Committee of Inquiry Report.

(b) *Underground Wiring:*

Last July the RAIC and TPIC, through their provincial associations and local chapters, launched a nation-wide campaign to focus attention on the need to rid Canadian cities of unsightly over-head wiring. This

campaign consisted of letters being written to mayors, to public utilities companies, and provincial rate setting commissions, pointing out both practical and esthetic advantages in placing electrical distribution systems under-ground. The response thus far has been favorable, to the extent that there is almost universal agreement supporting under-ground wiring in principle, however, a practical obstacle exists in the additional costs which must be met in burying utility wiring. The hope is that new technological developments providing more efficient and less costly means of underground distribution, plus greater public interest and support, will encourage authorities to take more positive steps in this matter of underground wiring.

(c) May 2nd Conference of National Organizations:

On May 2nd, a conference of national organizations, sponsored by the RAIC, took place in Toronto, to discuss progress being made in implementation of the Report recommendations, to determine the specific interests of the organizations represented, and to consider jointly what further measures could be taken to act on the Committee of Inquiry Report. The principal point of agreement arising from conference discussion was the recognition of the importance and necessity of creating a Canadian Institute of Urban Studies, (Recommendation 201).

(d) Preservation of Historic Structures:

In order to assist the RAIC Committee on the Preservation of Historic Buildings, and also as a means of carrying out recommendation 177 of the Report, the Royal Institute forwarded letters to the mayors of some 285 municipalities in Canada asking them to inform the Institute of those structures within their respective municipal boundaries which were considered to be worthy of inclusion in a national inventory. The municipalities were also asked to review what means were available to them to prevent the demolition of structures which could most capably reflect our Canadian heritage. The response from the municipalities addressed was very favourable and should, in total, provide much assistance to the Preservation Committee in its work on the development of a national inventory.

Examples Of Action Taken On Certain Recommendations:

This final report on my activities as Special Assistant would not be complete unless some reference was made to progress which has been achieved in carrying out some of the more significant recommendations in the Committee of Inquiry Report. A brief summary of steps taken on certain recommendations are, therefore, indicated below:

Recommendation 86: Last fall the National Industrial Design Council was contacted in connection with the recommendation urging the Council to prepare an illustrated catalog of street furniture. With the recent transfer of the Design Centre of the National Gallery to the Department of Trade and Commerce, the work on the preparation of this catalog was temporarily suspended. More recently, the Institute was advised that the preparation of the catalog was on the agenda of the

work program of the Design Branch of the Department of Trade and Commerce and it was expected that the catalog would be completed some time during the fall of this year.

Recommendations 158, 162, 167, and 171: These recommendations were considered at a number of meetings of the RAIC-CMHC Joint Committee and also at the March 24th joint meeting of representatives from the RAIC and TPIC. There was general agreement that studies proposed to give effect to these recommendations would require staff, work and other facilities which are not generally available to any one particular organization, and it was agreed that these recommendations might form the basis of work to be carried out by or through the proposed Institute of Urban Studies.

Recommendation 201: In February of this year a meeting of interested persons was held to consider matters relevant to the establishment of a Canadian Institute of Urban Studies. Arising from this meeting, a three-member steering committee was formed consisting, Stewart Bates, (Hon F) President of CMHC; Eric Beecroft, representing the Canadian Federation of Mayors and Municipalities; and Peter Dobush (F) of the Royal Institute. Through this steering committee a number of individuals were contacted and asked for their views as to the nature and form of the proposed Institute. More recently the steering committee called a meeting to take place in October to discuss the establishment of such an organization. Persons being invited to attend this meeting are those broadly representative of Canadian interest in the problems of urban growth and development.

RAIC-CMHC Joint Committee:

It should be recognized that the principal source of inspiration in evolving techniques or approaches in treating specific recommendations was the RAIC-CMHC Joint Committee. During the past ten months, the Joint Committee met on six separate occasions to review those measures which had been undertaken and to suggest new measures where this was considered necessary.

It will be recalled that Mr James Murray (F), Chairman of the Joint Committee, presented a resolution to the 54th RAIC Annual Assembly last May, recommending that the Institute begin to concentrate on those recommendations which were of basic concern to the architectural profession, leaving to other organizations the responsibility and opportunity for furthering those recommendations of primary interest to them.

It is significant that following the adoption of this resolution, the Institute again requested the Joint Committee to consider and recommend specific steps be taken by the Institute in dealing with those recommendations that have an essentially architectural content.

The work of the Joint Committee has been of fundamental importance in developing and carrying out the implementation program, and it is appropriate that its contribution should be recognized here.

Resulting from the request that the Joint Committee consider what further implementation measures might be taken, the Report of this Committee to the Executive of the Royal Institute follows this submission.

Conclusion:

One can state fairly that the results of the Implementation Program will not become evident for some months, or indeed, years. The past ten months' operation in fact, represents primarily a beginning of what must be a continuing program of activity on the part of many organizations and agencies which can influence, through their day to day activities, the residential environment. Some results of the actions of organizations are apparent already, such as the steps being taken to organize the Institute of Urban Studies, and the development of public interest in the campaign of the RAIC to promote underground wiring. In other matters posi-

tive achievement will not be evident for some time. If the implementation program has served to create an awareness of the problems of fashioning an urban environment appropriate for a rapidly growing urban population, and of the dire consequences if this is not done, then the work carried out over the past ten months has been, I believe, worthwhile. I hope that this is the case. I trust also that, in a real sense, the conclusion of the separate operation to implement the Committee of Inquiry Report marks the beginning of a greater and a continuing participation on the part of the architectural profession in the matter of residential design.

Edmund Fox

Report of the Chairman, RAIC-CMHC Joint Committee on Housing

IN ACCORDANCE WITH THE RESOLUTION passed at the 54th Annual Assembly, the Joint Committee has considered the further implementation of the Committee of Inquiry Report with specific concentration on those aspects of the inquiry recommendations which are of a predominantly architectural nature.

The general implementation program to date may be considered under two headings: (1) Recommendations requiring no further implementation; (2) Recommendations being currently processed.

A summary of activities under these headings would be as follows:

1. Recommendations requiring no further implementation measures

The Joint Committee concluded that all reasonable measures had been taken by the Institute to act on the following recommendations and that further steps would be the responsibility of the various agencies both public and private, which have the primary interest in these matters.

- No. 51 Utilize Federal-Provincial land assembly provisions to greater extent.
- No. 56 Action to identify areas of irreplaceable agricultural value.
- No. 72 Review appraisal formulae to give more inducement to build quality into housing.
- No. 85 Insure recognition of outstanding work by distribution of photos.
- No. 95 Survey operating costs of housing.
- No. 136 RAIC to promote behavioral and economic studies of residential environment.
- No. 138 Encourage and promote residential design.
- No. 158 Close study of useful identification of density and housing.
- No. 162 Thorough study of provinces of impact of public regulation over intensity of urban land use on private property values.
- No. 167 Studies of impact of major roads on adjoining private properties.
- No. 171 Discover trends in uses made of open space (recreation).
- No. 175 Chapters of Design Professions to offer sketches for development of public sites.

- No. 185 Study general change to a system of real property on site value.
- No. 188 Make economic analysis of regions undergoing fastest urbanization.
- No. 190 Coordination of Federal development policies.
- No. 201 Establish Canadian Institute of Urban Studies.

2. Recommendations being currently processed.

This group of recommendations represents in large measure the Joint Committee's proposed program of activities with respect to the Committee of Inquiry Report. It should be noted that the Joint Committee also proposes an additional program lying outside the inquiry — a continuation in effect of its pre-report activities.

- No. 62 To develop logical codes for siting of residential buildings.
- No. 69 Utility regulating authorities to study electrical distribution systems.
- No. 86 Prepare a catalog of street furniture.
- No. 99 Build pilot projects.
- No. 141 Support establishment of a professional school of landscape design.
- No. 143 RAIC to explore and develop system for provision of dwelling plans.
- No. 145 RAIC to recognize and impress on component associations mutually satisfactory terms to profession and building industry.
- No. 153 Permits for projects to require full visual exhibit.
- No. 173 Powers for cities to buy lands.
- No. 175 Chapters of design professions to offer sketches for development of public sites.
- No. 177 Preservation of historic architecture.
- No. 181 Vigorous program for removal of housing and creation of public housing.
- No. 182 Stimulate rehabilitation of older houses.

In accordance with the above analysis, if such be the wish of the Institute, the Joint RAIC-CMHC Committee would be pleased to serve the Institute as a Committee responsible for carrying out their further participation and obligations in matters of the residential environment. Respectfully submitted,

James A. Murray, FRAIC, AMTPIC.
September 22, 1961. Chairman, Joint Committee.

CANADIAN

BUILDING DIGEST

DIVISION OF BUILDING RESEARCH • NATIONAL RESEARCH COUNCIL



CANADA

CONCRETE FLOOR FINISHES

by H. B. Dickens

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The most common industrial floor finishing material used today is concrete. When well laid it provides a hard and durable surface capable of meeting most floor service requirements at relatively low cost.

Yet many concrete finishes fall far below expectations. A survey by the American Institute of Plant Engineers in 1960 indicated that floors are the third most troublesome item in plant maintenance. The importance of this problem in Canada is perhaps reflected in the large number of inquiries that are directed each year to the Division of Building Research for advice on the causes of concrete floor deterioration and on methods of repair.

The premature failure of an industrial floor is a matter of real concern to the architect, the contractor and the owner of a building as well as to the user; a "weekend" patching job will rarely suffice and often the entire floor topping has to be removed and a new surface laid, resulting in costly interruptions in plant use.

Experience suggests that most failures can be attributed to improper design or poor workmanship and could have been avoided with careful attention to the factors that make for a quality installation. It is the purpose of this Digest to discuss these factors in relation to new concrete floor finishes. Some information is also provided on the more commonly used surface treatments for concrete floors.

The Base Slab

For simplicity, it will be assumed that the base slab on which a finish is to be installed has adequate structural strength for the applied loads. The concrete should be made with hard well-graded aggregates and should normally contain not more than 4% gallons of water for each sack of cement. It should be a

plastic mix that can be placed without voids and without accumulation of excess water on the surface. The proportions of fine and coarse aggregate should be adjusted to obtain a mix of desired workability but should normally be in the range of 1 part cement to 2½ parts of fine aggregate to 3½ parts of coarse aggregate. The aggregate should be well graded, the fine material ranging in size from ¼ inch down and the coarse material from ¼ inch up to 1½ inches. The concrete should be thoroughly compacted by vibrating or by tamping and spading. Subsequent steps will vary with the type of floor finish selected.

Selecting the Finish

The method of finishing a new floor should depend on the service requirements to which it will be exposed. For light duty, where abrasion is not a serious problem, it may be sufficient to finish the base slab simply by floating and trowelling. If a power float is used, such a floor should be satisfactory for trucks with rubber tired wheels and even for light trucks with steel tires. The concrete should be floated to the desired grade and allowed to stand until all water sheen has disappeared. Final trowelling should be done only when the concrete is so hard that no mortar accumulates on the trowel and a ringing sound is produced as the trowel is drawn over the surface.

There are many industrial uses, however, for which the plain finish floor is not adequate and it becomes necessary to provide an improved surface by applying a special wear resistant topping. This topping may be placed either monolithically during the laying of the base slab and before it has set, or as a separate layer applied after the base slab has hardened. Both methods are used and each has its spe-

cific advantages.

One advantage cited for a monolithically applied topping is that it more readily ensures a good bond between the topping and the base. Separation and curling of the wearing layer that result from inadequate bonding combined with the effects of shrinkage are common faults in separately applied toppings; they are aggravated as the toppings are made thicker.

In contrast to this a monolithic finish must usually be laid much earlier in the construction schedule and is therefore vulnerable to damage during subsequent construction operations unless carefully protected. It may also have to be applied under relatively poor placing conditions since it must be fitted into the regular schedule of construction. A separate topping can be placed under good conditions when the building is closed in and the heating system available for use if required. In addition it is claimed that separate toppings permit more accurate control of the water cement ratio, a factor that has a most important effect on the quality of the finish.

In laying concrete toppings there are certain specific requirements that should be observed for each type of finish. In monolithic construction the base slab should be made with concrete no leaner than 1 part of cement to 2½ parts of fine aggregate to 5 parts of coarse aggregate so that it will have sufficient strength to withstand the shrinkage stresses that are set up by the richer topping. It should be of a stiff consistency to prevent free water from working up through the topping and increasing its water cement ratio; alternatively the topping should not be placed until the base has partially set and no free water is available.

When a separate topping is to be applied, the base slab should be swept with a wire broom before it hardens to roughen the surface by exposing the aggregate and to remove all laitance, dirt or loose aggregate. It should be thoroughly wetted just before the finish is placed, but there should be no pools of water left on the surface. A thin coat of neat cement grout should be brushed well into the surface just before the topping is spread. This will assist in obtaining a strong bond between topping and base. Waterproofing admixtures in the base slab should be used with care as these may tend to restrict penetration of the cement slurry and reduce bond.

Control of Quality

The main principles of good concrete floor

construction are not new. They are simply the application of current concrete technology to the particular requirements of floors. Much of the discussion contained in CBD 15, "Concrete," is of direct interest to this problem which involves:

- (i) the quality of the aggregate,
- (ii) the proportions of the mix and amount of mixing water used,
- (iii) the operations of placing and finishing,
- (iv) the provisions for proper curing of the newly placed floor and its protection until it has attained sufficient hardness for service.

It is well to remember that good concrete is made of cement, water and aggregate and that poor concrete is made of the same materials. The difference lies in the grading of the aggregate, the proportioning of the mix and the care with which the vital operations of placing, finishing and curing are carried out.

Since aggregates represent nearly 75 per cent of the mass of the concrete and provide the main wear resistance of the floor finish, they must be of proper quality. They should be clean and free from dust, clay, silt or frozen material, have sufficient hardness and satisfy the standard tests for durability. Grading is as important as hardness since poorly graded aggregates require an excessive amount of cement paste to fill the voids and result in crazing and dusting at the surface as well as reduced wear resistance. Too much fine material will require a large amount of mixing water and a high water cement ratio that in turn means a low-strength non-durable concrete subject to excessive shrinkage. Additional cement may be added to maintain a low water cement ratio but this too contributes to increased shrinkage.

Grading also affects the ease with which topping can be placed. It is recommended that fine aggregate should consist chiefly of 1/16- to ¼-inch particles with not more than 5 per cent of the grains passing a 100-mesh sieve and not more than 15 per cent passing a 50-mesh sieve; coarse aggregate should range in size from ¾ to ¾ inch with all particles passing a ½-inch sieve. Special aggregates offering increased abrasion resistance and non-slip properties may be added to the surface finish by dusting on a mixture of the aggregate and cement and then floating the material into the freshly placed concrete topping.

In proportioning a floor topping there are

two main requirements to be kept in mind. The mix should be as lean as possible, containing a minimum of cement and water to give low shrinkage and lessen the risk of cracking, curling and dusting. The mix must be sufficiently workable for it to be placed without the prolonged tamping or vibration that cause segregation of the aggregate and bring fine material to the top, creating a weak surface layer.

A high quality wearing surface will have uniform distribution of coarse aggregate through the entire depth of finish and up to the wearing surface with no film of laitance or weak mortar at the surface layer. The proportions of the topping mix largely govern the degree to which this standard of finish can be attained. Although the best finishes are obtained from a relatively harsh stiff mix, a topping mix can be too dry for proper placing. The desired consistency will depend on the method of placing, whether hand labour or mechanical equipment is to be used.

A relatively lean dry mix that is difficult to work with hand tools can be readily compacted and smoothed with power driven equipment. Such a mix is obtained by using one part of cement, one part of fine aggregate, 2 parts of coarse aggregate by volume, and a water cement ratio of only $3\frac{1}{2}$ gallons per sack of cement. This provides a mix with very low slump. It is not easy to spread this dry mix uniformly, but with power tools such as the vibrator screed and the mechanical float it can be done satisfactorily, and the improved wearing qualities that result fully justify the use of such equipment. If it is necessary to work it by hand, the water cement ratio must be increased to 4 or $4\frac{1}{2}$ gallons per sack of cement and, in addition, a slightly richer mix may be required.

Power machines are particularly effective in overcoming one common cause of defective floors: incorrect timing of finishing operations. Richer mixes and the increased water content required to make a mixture sufficiently workable for placing with hand labour necessitate a waiting period while the topping becomes stiff enough to trowel. This waiting period is a source of much difficulty in floor finishing. Floating, which is done to compact the surface, fill the holes and level out the humps left after screeding, if done too soon will increase the bleeding action that produces laitance and a soft layer of material at the surface. Trowelling, which provides the final smooth finish to the floor, will also tend to

bring moisture and fine materials to the surface if carried out before the mix has attained sufficient stiffness. With the stiff mix made possible by power equipment these dangers are largely eliminated; there is little or no waiting period and the finishers can begin work almost as soon as the topping is placed. Close supervision of all operations is, however, a necessary prerequisite of a high quality floor. Such supervision must ensure that no short cuts are taken; to hasten drying of the surface of the mix by dusting on dry sand or cement, or to add water to make trowelling easier once the mix has attained a stiff consistency can have particularly serious results and must be avoided.

Finally, there is the vital factor of adequate curing. Its neglect is a prime cause of early deterioration. The chemical reactions between cement and water that cause them to harden continue only if moisture is present and the temperature is favourable. The internal structure of the concrete is built up to provide strength, resistance to wear and water tightness. Floor finishes, however, present such large surface areas that loss of moisture through evaporation takes place rapidly unless measures are taken to prevent it. Rapid drying not only stops the chemical reactions but may cause dusting and cracking of the surface because shrinkage takes place before the concrete has much strength. To prevent drying, water for curing should be applied to the concrete as soon as is possible without marring the surface.

Frequent sprinkling or covering of the surface with wet sand are common methods of curing. The application of polyethylene sheet will greatly assist curing if the joints are tightly sealed to prevent evaporation. Ponding is another method sometimes used; the floor slab is surrounded by small dykes of sand and the enclosure kept filled with water to a depth of at least 1 inch. The curing period should be at least a week in mild weather and longer in cold weather, although this can be reduced where high early strength cement is used. For best results temperature should be above 50°F since concrete hardens very slowly at lower temperatures. At freezing temperatures all concrete should be protected until it has gained sufficient strength. When necessary, heat should be furnished. These precautions are particularly important for floors because of their large exposed area and limited thickness.

Artificial heating devices must be used with great care, since the high temperatures near

them cause too rapid drying unless the concrete is well protected. Heaters should be raised and the floor underneath for a distance of several feet on all sides should be covered with 3 or 4 inches of sand saturated with water during the curing period. In addition, fuel-burning heaters should be vented to prevent accumulations of carbon dioxide within the enclosure. It can be harmful to fresh concrete during the first 24 hours by causing excessive carbonation of the surface.

Surface Treatments

Even the best floor will tend to produce some dusting of the surface in use. This can be reduced by applying a material that will assist in hardening and binding, but these treatments should not be regarded as cure-alls for poor materials or careless workmanship. Although treatment will improve many surfaces it cannot be expected to make a good wearing surface of a poorly built floor. A number of proprietary hardening materials are available.

Solutions of fluosilicate of zinc and magnesium in water have been used with success either separately or as a mixture of 20 per cent zinc and 80 per cent magnesium. Linseed, china wood or soybean oil may also be used as surface treatment. By sealing the floor finish they help to protect the floor from some materials used in industry that will attack concrete. In the more severe industrial exposures, such as in chemical laboratories and acid plants, these treatments will be of little use and special acid proof coverings may be required.

Where appearance and decorative effect are important, concrete floor paints or inorganic chemical stains may be applied. Paints require protection in areas of heavy traffic and stains may need several applications before the desired colour effect is obtained. Colour may also be achieved by mixing pure chemical pigments with the concrete topping at the time of placing. Occasionally, a dusted-on colour mixture has been used but it is only suitable for floors subject to light foot traffic. Its application involves a difficult operation and it is not easy to obtain satisfactory results. All of these surface treatments may be further protected with an ordinary paste wax.

Instead of a surface treatment, a concrete slab may be covered with one of the many

common flooring materials including asphalt, linoleum or vinyl tile, slate, concrete or ceramic tile, terrazzo or hardwood flooring. The selection and application of appropriate material is beyond the scope of this Digest but there are certain basic requirements that should be mentioned. These relate mainly to problems of moisture. Concrete floor slabs in contact with the ground (either below or at grade level) require a flooring material resistant to moisture and alkali. In addition, it is wise to include a moisture resistant membrane beneath the base slab and to make adequate provision for drainage in the sub grade.

With a suspended concrete floor, ground moisture is not a problem but the concrete itself must be allowed to dry thoroughly before coverings such as asphalt, linoleum, vinyl or wood are installed. A simple test to determine whether a concrete floor is dry is to place several pieces of a material such as polyethylene, rubber or linoleum over the floor and weight them down to maintain close contact. If there are no damp spots after 24 hours the flooring can be safely applied.

Summary

This Digest has considered the factors that affect the quality of a concrete floor-finish. Much useful information as well as suggested specifications may be found in the publication of the Portland Cement Association entitled "Concrete Floor Finishes" that is distributed in Canada by the Canada Cement Company. It is wise to remember, however, that even with a sound specification the quality of a concrete floor is still very much dependent on the workman on the job. The aggregate may be carefully selected, the materials properly proportioned, the base slab well prepared, yet a poor quality floor may still result from the use of too wet a mix or incorrect timing of the finishing operations.

It is unfortunate that the easiest way to lay a concrete floor is with a wet mix since such a mix readily allows the aggregate to segregate, produces laitance on the surface and has a high drying shrinkage and low strength. The end result is usually limited abrasion resistance, surface dusting, shrinkage cracking and bond failure. Avoidance of such failures depends as much on quality control at the site as on the correct design of the floor.

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THE RESIDENTIAL ENVIRONMENT REPORT:
A FINAL SUMMING UP

WHEN THE FEDERAL HOUSE OF COMMONS met at Ottawa last month, the Minister of Public Works introduced a measure on September 19 to amend the National Housing Act, and one of his four proposals sought to increase from five to ten million dollars the maximum charge on the Consolidated Revenue Fund for housing research and community planning.

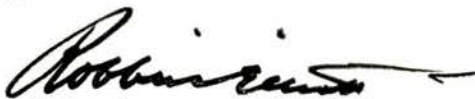
During the course of his remarks, Mr Walker commented: "As Minister I have been amazed at the great interest manifested in better housing as the result of the encouragement of scholarships and bursaries and the urban renewal studies provided by the Government."

Later in the debate, the member for Scarborough, Frank McGee, demonstrated his knowledge of the RAIC Committee of Inquiry report in uttering this arresting statement: "This government's participation in research and intelligent planning in this field, exemplified by the grant which the Government made to the Royal Architectural Institute of Canada to survey and report on the urban environment in Canada, was one of its more significant acts." The Toronto member said further: "That report (residential environment) has been studied since its presentation last year. Within the Institute a Committee has been established to explore ways and means of implementing recommendations of that report".

It is abundantly clear that the curiosity and concern of the architectural profession since 1959 about the nature of Canada's urban environment — as demonstrated by the publication of the Committee of Inquiry report — has not gone unnoticed among our politicians, other professions and the general public.

The special fund of \$12,500, collected by the RAIC from architects and architectural firms a year ago to help speed the implementation of the thirty-two recommendations in the report, has been expended but the work will go on. The story of implementation is told in a four-page enclosure with this issue.

There should be no lingering doubts about the feasibility of implementing important portions of the Residential Environment report since the keystone recommendation of the document—that Central Mortgage and Housing Corporation call a conference to discuss the desirability of forming an Institute of Urban Studies — has led, after seven months of exhaustive examination, to such a founding conference being convened at Corporation headquarters in Ottawa on October 20.



CONDITIONS DE L'HABITATION — SUITE AU RAPPORT

LE 19 SEPTEMBRE, peu après la reprise de la session fédérale, le ministre des Travaux publics a présenté à la Chambre un bill tendant à modifier la Loi nationale sur l'habitation. Une des quatre modifications projetées tendait à porter de 5 à 10 millions de dollars le montant pouvant être prélevé sur le Fonds du revenu consolidé pour la recherche sur l'habitation et l'aménagement des collectivités urbaines.

Au cours de ses remarques, M. Walker a déclaré: "En tant que ministre, j'ai été étonné du grand intérêt qu'on manifeste pour la recherche de meilleures habitations, par suite de l'encouragement que constituent ces bourses d'étude et de recherche ainsi que les études de réaménagement urbain dont le gouvernement assume les frais".

Au cours du débat, M. Frank McGee, député de Scarborough, a prouvé qu'il était au courant du rapport de notre comité d'enquête en disant: "La participation du gouvernement à la recherche et à la planification intelligente dans ce domaine, dont on trouve un exemple frappant dans l'octroi qu'il a accordé à l'Institut royal d'architecture du Canada pour qu'il fasse enquête sur les régions urbaines au Canada et présente un rapport à ce sujet, a été l'un des gestes les plus significatifs du gouvernement". Un peu plus tard, il a ajouté: "Ce rapport (sur les conditions de l'habitation) a été étudié depuis sa présentation l'an dernier. L'institut intéressé a formé un comité chargé d'étudier les moyens d'appliquer les recommandations que renferme le rapport".

Il est manifeste que la curiosité et l'intérêt des architectes, depuis 1959, à l'égard de la situation dans les centres urbains, manifestés par la publication du rapport du comité d'enquête, ne sont pas passés inaperçus des hommes publics, des membres des autres professions ni du public en général.

Le fonds spécial de \$12,500 que l'Institut a recueilli l'an dernier, des architectes individuels et des firmes, afin de hâter la mise en oeuvre des trente-deux recommandations est aujourd'hui dépensé, mais le travail va continuer. Les résultats obtenus sont consignés dans le rapport de quatre pages envoyé avec le présent numéro.

La possibilité de donner suite à certains passages importants du rapport ne fait plus de doute. La principale recommandation invitait la Société d'hypothèques et de logement à convoquer une réunion pour étudier l'à-propos de fonder un institut canadien d'urbanisme. Or voici qu'après sept mois d'études, cette réunion a été convoquée au siège de la Société à Ottawa pour le 20 octobre.

LETTERS TO THE EDITOR

The Editor, RAIC *Journal*

The Officials of the Toronto Board of Education are very pleased to have been featured in the July issue of your *Journal*. We are more than pleased that in this particular edition on school design, three of the schools built by the Toronto Board of Education were described.

*R. Harvey Self,
Board of Education, Toronto*

The Editor, RAIC *Journal*

In the introduction of the June 1961 issue of the RAIC *Journal* you outline some of the problems in connection with hospital design that a RAIC com-

mittee on hospitals could tackle. The first of these is:

"The sifting of technical papers and books, etc. that have been published to determine what is excellent, good or poor with special reference to Canadian methods and problems."

I would like to bring to your attention two abstract services of the literature on hospitals. The first is the Hospital Planning Abstract Service published bi-monthly by the American Hospital Association, 840 North Lake Shore Drive, Chicago 11, Illinois.

The second are the Hospital Abstracts published monthly as a survey of world literature by the Ministry of Health of Great Britain and available from Her Majesty's Stationery Office, London.

I pass this information along to you so that it will become evident that the job of sifting through the literature would be not nearly as formidable as it might appear in view of the invaluable assistance that these abstract services can provide.

*A. E. Brass, Building Standards Section,
Division of Building Research,
National Research Council, Ottawa.*

Editor, RAIC *Journal*

I wish to inform you that the photographs on page 43 of the *Journal* RAIC of July 1961, carried the wrong credits. The photographs of the Owen Sound School were credited to Neil Newton. They were taken by me.

Len Tomiczek, Toronto

INSTITUTE NEWS

Review of Environment Report Implementation Program to Date



James Murray (F)

Edmund Fox

On Pages 73 to 76 of this issue the *Journal* presents the reports to the Executive Committee on September 22-23 by Mr Edmund Fox and Mr J. A. Murray (F) on the accomplishments of the ten-month period devoted to implementation of the recommendations in the Report of the RAIC Committee of Inquiry into the Design of the Residential Environment. Mr Fox, whose attachment to RAIC Headquarters on loan from CMHC as special assistant on Report implementation was made possible by contributions from architects across Canada to a special fund for the purpose which, in the end, totalled \$12,500, has returned to CMHC. The report by Mr J. A. Murray (F), Chairman of the RAIC-CMHC Joint Committee on Housing, outlines the work of the committee in directing the implementation program. The contributions to the success of the whole program by Mr Fox and Mr Murray and his committee are fittingly acknowledged in a foreword to both reports by the President RAIC, Mr Harland Steele (F).

Executive Committee Meets at Ottawa

The RAIC Executive Committee met at Institute Headquarters in Ottawa on September 22-23 to review RAIC operations for the first three quarters of the year and to make plans for 1962. The President, Mr Harland Steele (F) was in the chair, and eleven members, representing five Provincial Associations, attended.

A highlight of the quarterly meeting was the presentation of an official report by Edmund Fox, who retired effective September 30 from the post of special assistant in charge of implementing the report of the Committee of Inquiry into the Design of the Residential Environment. Mr Fox has returned to Central Mortgage and Hous-

ing Corporation to undertake new staff duties. Decision was taken to place a full report on implementation activities in the October issue of the *Journal*, and send letters to individual architects and firms who contributed moneys to the September 1960 financial campaign conducted by the Institute.

G. Everett Wilson, (F), Toronto, Chairman of the Premises Committee formed last April, reported to the Executive that the RAIC has submitted a proposal to the National Capital Commission regarding the erection of a new Institute headquarters building on Sussex Drive, following a Federal Government decision to restore several blocks of central Ottawa as a 1967 Centenary project. The Sussex Drive building proposal was enthusiastically endorsed by the Executive, and a further communication is being directed by the President to the Prime Minister.

Committee members were informed that the Historic Sites Division of the Department of Northern Affairs and National Resources has approved a recommendation from the RAIC Committee on the Preservation of Historic Buildings that the Department create machinery for the progressive development of a national inventory of buildings meriting preservation. This action follows the writing of a special report for the Department by Anthony Adamson (F).

W. R. Dymond, Assistant Deputy Minister of Labor, appeared before the Executive Committee to present the viewpoints of his Department on ways and means to foster wintertime construction. It was agreed that the Institute would form an Ottawa liaison

NEXT ISSUE

**The 1961 Massey Medals
For Architecture
The Gold Medal
and the
19 Silver Medal Winners**

**Competition Results
The Stainless Steel Design
Award Committee
Competition
for a
Branch Bank and
its Furnishings**

committee to work with the Federal Government.

An interim report from the newly-established committee on uniformity of fees (E. C. S. Cox (F), Toronto, Chairman), told about the circulation of a draft document entitled "Conditions of Engagement of the Architect and a Schedule of Charges for Professional Services". The draft is now being reviewed by a national committee.

The Executive Director reported that the stage was set for the final judging of 1961 Massey Medals for Architecture exhibition entries at Ottawa on Thursday and Friday, October 12 and 13, and that the Governor-General will present medals and open the exhibition at the National Gallery November 2.

A report on the VI Congress of the International Union of Architects at London in early July, presented by Joseph Pettick, Regina, Chairman of the RAIC International Relations Committee, was received by the Committee.

Plans for the 1962 RAIC Assembly to be held at the Bayshore Inn, Vancouver, B.C. from Wednesday through Saturday, May 30 - June 2, 1962 were reported by W. G. Leithead, (F), Vancouver, Host Committee Chairman. The theme for the 55th Annual Assembly next year will be Architectural Education.

New Film on Winter House Building

A new film, "House Building in Winter" (16mm. black and white, 20 mins), has been produced by the National Film Board for the Division of Building Research of the National Research Council at Ottawa. The new film, which supplements the Division's earlier production - "Winter Construction-It can be done"-deals with special cold weather techniques in house construction, from excavation and foundations through to the final finishing. Copies may be obtained on loan from the Housing Section, Division of Building Research, NRC.

POSITIONS VACANT

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1962 Assembly to be in Vancouver

The 55th Annual Assembly of the RAIC will be held at the Bayshore Inn in Vancouver BC and not at the Empress Hotel in Victoria, as previously announced.

Ontario

Local Ottawa Group Forms Joint Committee on Building Materials

Architects, engineers, contractors and suppliers throughout the Ottawa-Hull area met recently at the auditorium of the National Research Council to form a new organization to be known as the Ottawa Joint Committee on Construction Materials. The new committee, of broad interest throughout the construction industry, is an outgrowth of the Canadian Joint Committee on Construction Materials established in 1960 by the Royal Architectural Institute of Canada and the Canadian Construction Association.

A feature of the inaugural meeting was a spirited panel discussion on the "Designer-Supplier Relationship". Those participating were John B. Parkin (F), Toronto; Donald H. Jupp, CCA Honorary Secretary, Toronto; and Prof. J. L. de Stein, consulting engineer, Montreal.

Leonard Franceschini, chairman of the Ottawa Joint Committee, stated that the purpose of the new organization is to improve communication between

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architects and engineers who specify materials and methods of assembly, and the manufacturers and suppliers of the materials. Further joint meetings between members of the Ottawa Chapter of the Ontario Association of Architects and the Manufacturers and Suppliers Section of the Ottawa Builders' Exchange will take place during the fall and winter period.

Notice

W. H. Nesbitt, BArch, MRAIC, and G. Davies, MRAIC, ARIBA, are pleased to announce the opening of their own office for the practice of architecture, to be known as Nesbitt & Davies, Architects, 18 Owen Street, Barrie, Ontario.

Nova Scotia

New school of architecture opens at Nova Scotia Technical College

The new School of Architecture at the Nova Scotia Technical College, Halifax, opened September 15 with 12 students. The school is under the direction of Prof Douglas Shadbolt with the assistance of Mr Oscar Newman, lecturer in architecture.

The Board of Governors of Nova Scotia Technical College has established an advisory committee on Architectural Curriculum, with a committee composed of President G. W. Holbrook of NSTC as chairman; the Director of the School, Prof Shadbolt; the chairman of Graduate Studies, Prof Meyerhof; a representative of the Nova Scotia Association of Architects, C. A. E. Fowler, (F); a representative from the staff of an established Canadian school of architecture, Prof John A. Russell, (F), director of the School of Architecture, University of Manitoba. A sixth member, a representative from the RAIC, has yet to be appointed. The official opening of the school has been set tentatively for November 1.

The exhibition, "4000 Years of Mexican Architecture", recently completed a successful showing at the Halifax Memorial Library. The reception and interest shown by the public, sparked by press, radio and TV, was excellent.

A committee of the NSAA under the chairmanship of F. Carl Ford, has initiated an investigation into temporary licences and fees throughout

Canada. The replies from other associations has been most gratifying, and when the results of the study have been completed, the NSAA plans to forward copies to the other provincial associations, in line with an established national policy.

The Government Fees Committee, under the chairmanship of President John L. Darby and with members C. D. Davison, and C. A. E. Fowler, have been meeting with Provincial government representatives in order to prepare a Client-Architect Agreement form for school construction acceptable to the Province and the NSAA. The major question has been that of inspection and supervision, the requirements and payment for same. A final draft is expected shortly.

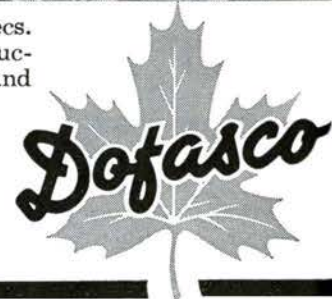
The joint Councils of the New Brunswick and Nova Scotia Association are planning to meet during the month of October with the main part of the business the planning of the RAIC Annual Assembly. The regular fall meeting of the NSAA and the New England Regional Conference at Hartford, Conn., on October 20 and 21 will provide a busy month for the Maritimes.
Lester J. Page

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Du Secrétariat de l'AAPQ

Dans un récent éditorial, le rédacteur en chef d'une revue locale m'a enlevé les mots de la plume. Aussi avais-je renoncé à l'idée de répéter les suggestions qu'il y faisait, lorsqu'un incident peu banal s'est produit et m'a incité à reprendre le thème. Une Commission scolaire passe tout récemment une résolution pour retenir les services d'une firme d'architectes. En moins d'une semaine, les mêmes commissaires adoptent une deuxième résolution, cette fois-là, pour annuler le mandat desdits architectes. Fait étrange, le commissaire qui propose l'engagement dans la première résolution est le même qui, quelques jours plus tard, appuie la résolution de renvoi. Avons-nous affaire à un imbécile, un finaud ou un malhonnête? On est en droit de se le demander. Diverses versions de l'affaire me sont parvenues depuis. Quelle que soit la raison de ce virage soudain, qu'il découle de la politique, de l'économie ou de tout autre domaine, il n'en reste pas moins vrai que les membres de notre Association sont plus souvent qu'à leur tour à la merci de tractations subites et sournoises. Ce n'est un secret de poli-

chinelle pour personne que nombre de nos municipalités et de nos commissions scolaires sont aux mains d'illettrés ou de citoyens d'acabit nettement inférieur, quand ce ne sont pas des vautours à l'affût de pots-de-vin sous toutes les formes imaginables. Dans bien des cas, ce sont de jolis ignorants, qui n'ont même pas fait une quatrième année, qui décident de l'engagement d'instituteurs, des volumes à utiliser dans les écoles et en général de ce qu'un écolier doit s'attendre de l'école, y compris le bâtiment qui l'abrite. Alors, comment voulez-vous qu'un architecte discute avec de telles gens et leur vende l'idée de bâtir de telle ou telle façon plutôt que de telle autre.

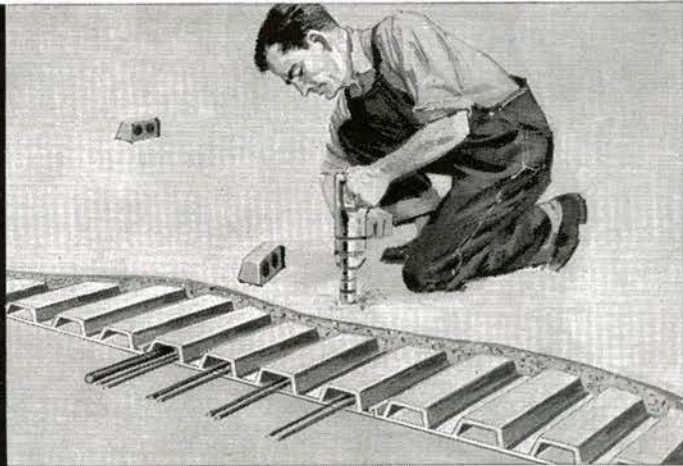
Il n'y a qu'une solution à ce cuisant problème, c'est, comme le disait le rédacteur dont je parlais plus haut, que les architectes s'intéressent de plus en plus à la chose publique. Combien d'architectes sont ministres, députés, maires, échevins, commissaires, etc.? L'AAPQ compte un député à Ottawa: R. John Pratt. Quelques-uns, à ma connaissance, s'occupent de mouvements d'action civique. C'est nettement insuffisant. S'il y avait eu un seul architecte à siéger à la Commission scolaire qui a remercié ces membres de notre Association de façon aussi étrange et

à si brève échéance, il y a dix chances contre une que la chose ne se serait pas produite.

L'architecte, il est regrettable de le dire, ne parle pas et n'écrit pas assez. Combien d'esquisses paraissent dans les journaux sans nom d'architecte. A toutes les semaines, on a l'occasion d'en vérifier l'omission. Ne nous attendons pas à ce que l'entrepreneur et l'ingénieur y voient. Chacun doit s'occuper de sa publicité ici-bas. Si l'architecte ne veut pas être la victime de renvois aussi ridicules que celui mentionné précédemment et s'il veut occuper le rang qui lui revient dans la société, il lui va falloir se mêler d'action politique, sinon se porter candidat, du moins suivre ce qui se passe dans son patelin. L'architecte est non seulement le représentant de son client immédiat, il a surtout et avant tout un rôle de premier plan à jouer dans la société. Il doit voir à ce que les deniers qui se dépensent pour des fins publiques le soient au plus grand avantage du public. En un mot, il doit surveiller de près l'administration et l'allocation des fonds publics en matière de construction.

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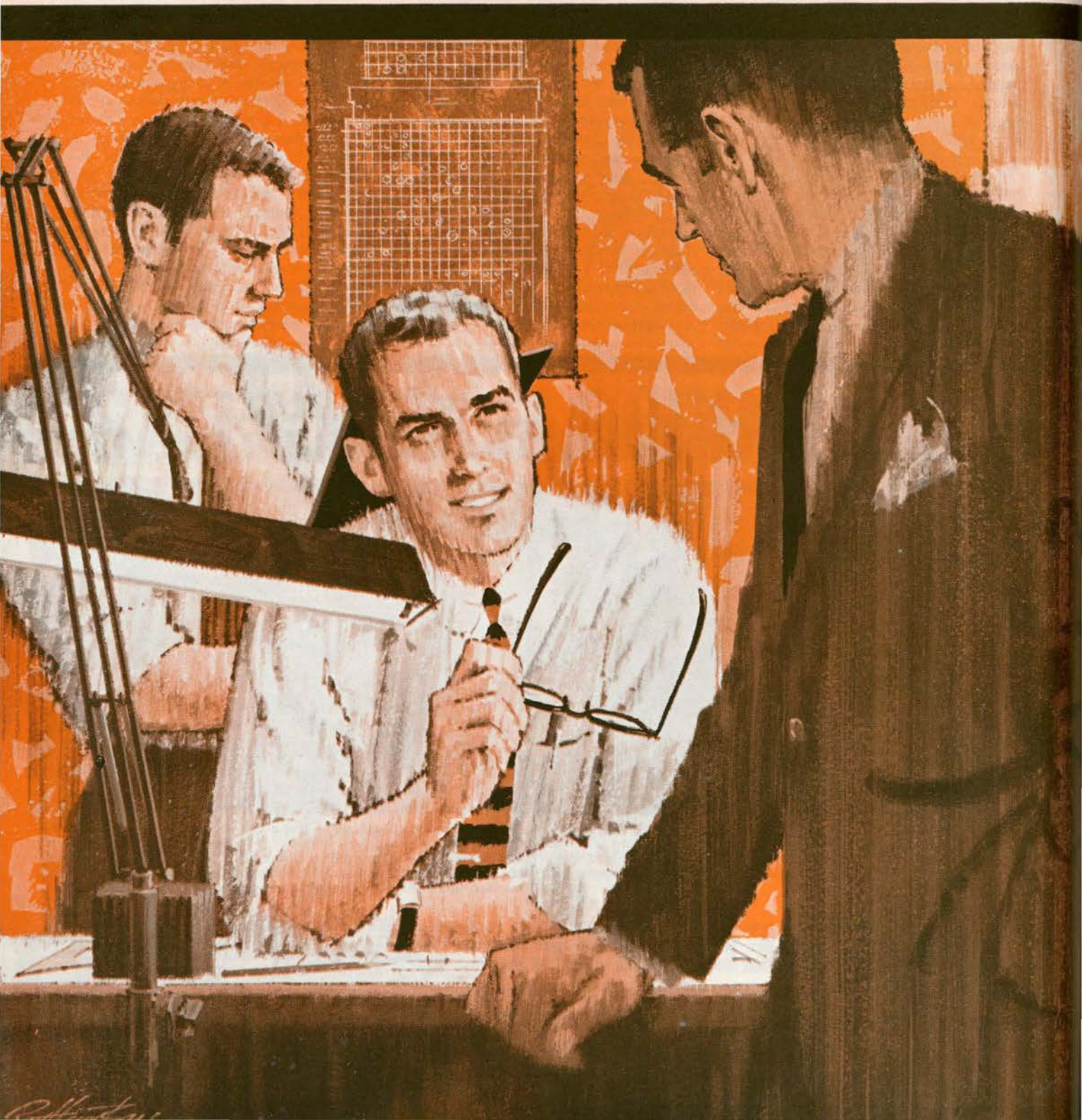
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des membres du Conseil et du Comité des membres et bourses d'études n'ont jamais vu ni connu le candidat qui fait sa demande d'admission. Il suffit à ce dernier de remplir une formule et d'établir la preuve qu'il a vu le jour au Canada ou qu'il a obtenu sa naturalisation, qu'il a terminé son cours d'architecture, qu'il a économisé de papier, sans doute, l'Ecole d'architecture de Montréal ne peut que remettre à ses diplômés un semblant de lettre qui indique les notes qu'ils ont obtenues en dernière année et qu'ils détiennent un diplôme qu'ils ne verront probablement jamais), qu'il a passé l'examen de pratique professionnelle de l'Association (qu'on ne peut rater qu'en faisant exprès), qu'il a été à l'emploi d'un ou de plusieurs architectes pendant au moins un an, maintenant deux, (sous forme d'une lettre que le patron doit faire assermenter sous peine de passer pour un menteur aux yeux de ses confrères), et, dernière condition mais non la moindre, de verser les frais d'inscription de \$100 et la cotisation annuelle de \$80. Une fois toutes ces pièces versées au dossier, l'inconnu peut porter le titre d'architecte et se prévaloir de tous les droits et privilèges que ce titre confère! Autant dire que l'article 9 de la Loi des architectes n'a jamais reçu son application intégrale. Cet article prévoyait que "des examinateurs s'assureraient et feront rapport des qualités des personnes qui se présentent pour l'admission à l'étude ou à la pratique de l'architecture." Depuis ses origines, l'Association a-t-elle jamais exercé un contrôle de l'admission à l'étude de l'architecture? J'en douterais fort. Quant à l'exercice de la profession, du moment qu'il a fourni toute la preuve précitée, le candidat y a automatiquement droit. Semblable situation anormale ne pouvait durer. Aussi, il me fait plaisir de faire part au membres de l'Association que le Comité des membres et bourses d'études s'est résolument mis à la tâche et a enfin décidé de mettre en vigueur l'article 9 de la Loi, du moins en partie. Comme suite à l'adoption du Bill 246 à la dernière session de la législature provinciale, le candidat devra maintenant faire au moins deux années de cléricature et le patron aura un rôle sérieux à jouer. Il ne lui suffira plus de déclarer que tel candidat a été à son emploi durant telle période de temps, mais il faudra qu'il détaille les travaux exécutés par le stagiaire et le temps qu'il a consacré aux différentes phases de la construction d'édifices. Ce n'est qu'au terme de cette cléricature, la logique le voulait, que le candidat pourra se présenter à l'examen de pratique professionnelle qui, lui aussi, subira des transformations radicales dans un avenir prochain. C'est l'opinion de celui

qui écrit ces lignes que l'AAPQ devrait faire subir des examens oraux à chacun des candidats à l'admission. Comme les professeurs à l'Ecole ont déjà fait passer des examens à ce candidat, il serait tout-à-fait normal, il me semble, que les oraux se passent devant des architectes en exercice, de façon à vérifier de manière concrète si le futur architecte peut joindre la pratique à la théorie. En attendant, on peut tout de même se féliciter que ça bouge.

Jacques Tisseur

REGISTRATIONS

AAPQ

June 5, 1961

Bergman, Maurice, 53 McNider Ave., Montréal, P.Q.

Bissonnette, Jacques, 388 ouest, rue St-Vallier, Québec, P.Q.

Gagnon, Guillaume, 1315, avenue William, Sillery, Québec 6, P.Q.

Gauthier, Paul, 26 De la Colline Nord, Sainte-Foy, Québec 10, P.Q.

Guité, Gilles, 20, rue Elgin Granby, P.Q.

Rousseau, Francois, 125, sud, rue Myrand, App. 2, Québec 10, P.Q.

Ste-Marie, Paul, 851, rue Carrington, Sept-Isles, P.Q.

Tremblay, Charles-Eugène, 6, rue Laurier, Kénogami, P.Q.

Aug. 7, 1961

Sirlin, Morley, B.Arch, University of Manitoba, 166 Wilson Avenue, Toronto 12, Ont.

COMING EVENTS

9th and 10th November, 1961
Fifteenth Canadian Soil Mechanics Conference
sponsored jointly by the
Associate Committee on Snow and Soil Mechanics, NRC, Ottawa and the EIC
Queen Elizabeth Hotel, Montreal

November 15-17, 1961
Western Canadian Conference
on School Architecture
Banff School of Fine Arts
Auspices of
Alberta Association of Architects

November 30 and December 1, 1961
Engineering Institute on Paints
The University of Wisconsin
University Extension Division
Department of Engineering
Madison 6, Wisconsin, USA

Jan 28-Feb 3, 1962
"Banff Session 62"
Sponsored by Alberta Association
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May 30-June 2, 1962
55th Annual Assembly
Royal Architectural Institute
of Canada
Bayshore Inn, Vancouver, B.C.



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Blumcraft of Pittsburgh		36
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INDUSTRY

Osmose Pressure Treated Wood Products

The Osmose Pressure Treatment is a new and better application of "Osmose" preservatives. Manufactured and processed in Canada, Osmose Pressure Treated Lumber meets specifications of the Canadian Standards Association and the American Wood Preservers Association.

Osmose Pressure Treated Wood is available in large or small quantities from our fully engineered plant, which is equipped to insure treated wood to match specifications. Prepared or custom treated wood can be supplied.

For further information write: Osmose Pressure Treated Wood Products (Ontario) Ltd., Bancroft, Ontario.



Seal-O-Matic and Slatekote

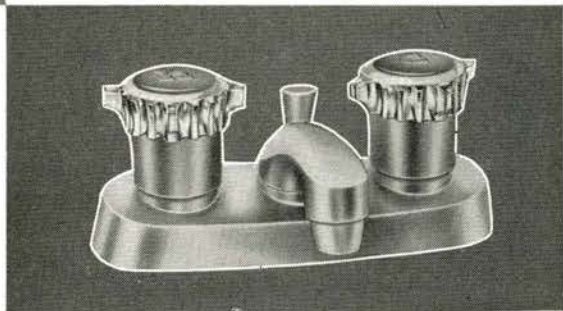
The complete line of Johns-Manville asphalt shingles for 1961 is described in a full-color brochure covering the self-sealing Seal-O-Matic and standard Slatekote roof shingles.

The brochure also provides a complete explanation of the Seal-O-Matic exclusive self-sealing properties.

Copies of the brochure are available in English (RF-85C) and French (RF-85CF) from Canadian Johns-Manville Co. Limited, 565 Lakeshore Rd. E., Port Credit, Ont.

THE CHOICE OF THE PROFESSION
For Design, Quality, Efficiency

Beautycraft MARK IV includes Centre Sets (with or without "pop-ups") lavatory combinations and tub and shower variations.



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the **MOEN DIALCET**

Dialcet — with ONE CONTROL for both water temperature and volume — outperforms any valve ever made. Handsome in design, with Acrylic trim, it's an attractive complement to Beautycraft MARK IV.

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MUELLER, LIMITED

SARNIA CANADA

MUTP-4-61



P.O. Box 62, Stn. "B"

The well-known brand of H & R Johnson ceramic wall tile, specified in Canada for forty years is now available direct from their Hamilton factory.

4 1/4 x 4 1/4 size in 1/4" and 5/32" thicknesses
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Both sizes are in a range of 23 colours, applied at Hamilton to the imported bisque.

Colour samples and all information on application to:

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Telephone: CR. 1-4653

2035 Eglinton Ave. W., Toronto
Telephone: RU. 7-0344

14536 118th Ave., Edmonton
Telephone: GL. 5-3311

A new High-efficiency Unit Filter From AAF

The AAF DRI-Pak Series 2000 is a new dry-type air filter of high efficiency, low resistance, compactness and unusual dust-holding capacity.

The DRI-Pak 2000 provides air cleaning efficiencies as high as 97% based on the National Bureau of Standards Dust Spot Method on Atmospheric Dust and is ideal for use in central air conditioning systems.

Cartridge life of the DRI-Pak is expected to be many months depending on the dust concentration, but can be extended appreciably by the use of a pre-filter which is incorporated in the standard design.

One of the draw-backs of most dry-type filters has been the maintenance factor. The unique design of the new DRI-Pak filter relieves many of the maintenance headaches normally associated with unit type design.

For full details write: American Air Filter Co. Inc., Louisville, Kentucky.

Honeywell Zone Control Manual

Residential zone control — suiting temperatures within a home to occupancy needs — is discussed in detail in a new 24-page illustrated dealer manual published by Honeywell Controls Limited. The booklet is designed to give dealers a thorough understanding of zone control.

In three sections, the manual discusses conditions where zoning should be considered in existing as well as new homes; presents each Honeywell Zone Control method for systems using forced hot water and two-pipe steam; explains various features and operating characteristics of Honeywell controls used in several hydronic zone systems. Illustrations and diagrams show typical layouts and installations covering a wide variety of temperature requirements.

For further information, write to Merchandising Division, Honeywell Controls Limited, Vanderhoof Ave., Toronto 17.

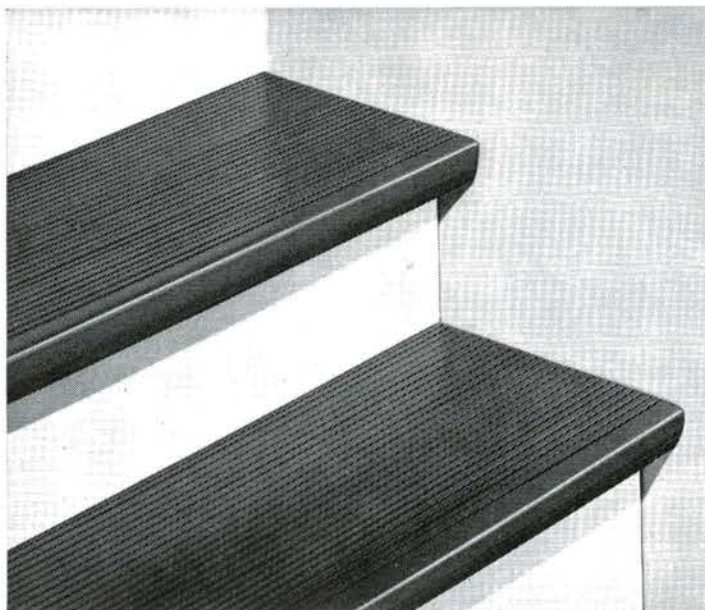
Sendzimir Galvanizing Unit

Two new, significant production units representing a combined investment exceeding \$33 million have been brought into operation by The Steel Company of Canada, Limited.

Installation of the Sendzimir galvanizing unit in addition to Stelco's existing Wheeling Line makes that Company perhaps the most diversified galvanized steel product producer on this continent.

Addition of the new Open Hearth furnace brings Stelco's annual steel-making capacity to 3,000,000 tons.

Two pioneering features of Canadian construction are represented in Stelco's new facilities. The 1700-foot building housing the galvanizing unit is the largest in Canada ever fabricated in Canada from rigid frame design. Stelco steel plates were welded to form structural supports instead of importing rolled structural members not produced in this country.



SPECIFY

Smith VINYL STAIR TREAD

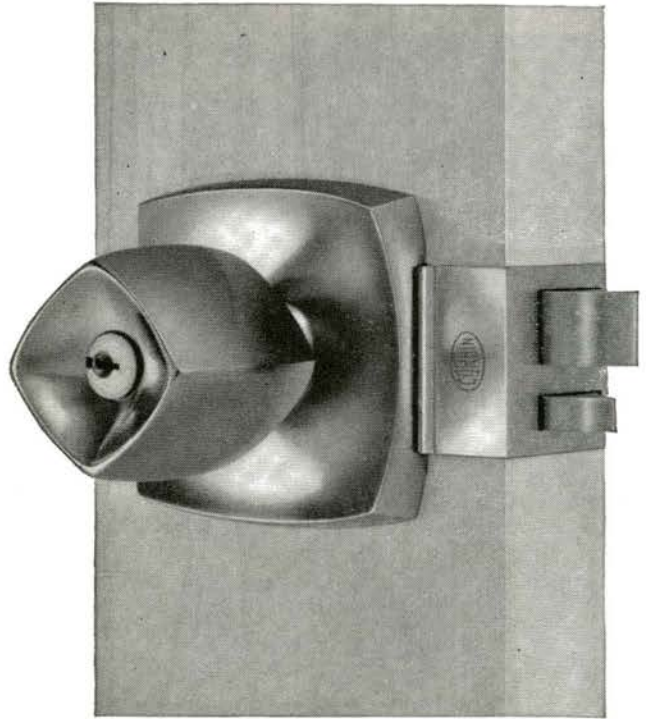
- Safer under foot
- Gives better traction
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- Age won't change texture

Write for complete technical data and samples

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Corbin gives you a complete line to choose from . . . a lock function for every need . . . a style for every building.

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SECURITY

Factory assembled one-piece "chassis" for matchless strength and durability. Automatic deadlocking for "tamper-proof" locking. *Plus* the unusually flexible master-ring cylinder for maximum protection.

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No field assembly of lock parts and trim required. Installed as a complete unit. Easy does it: simply notch, drill 2 holes, slip into place. No adjustment required.

... that's why it pays to make it CORBIN throughout!

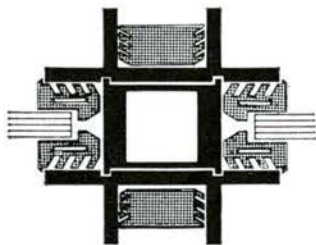


CORBIN LOCK DIVISION
INTERNATIONAL HARDWARE COMPANY OF CANADA LTD.
BELLEVILLE ONTARIO

For **today's** modern look . . . **tomorrow's** changing needs!



GSW ALUMINUM PARTITIONS



Unique universal aluminum posts (patents pending) are completely interchangeable and are recessed to receive the tongued insert-panels. Horizontal members fit snugly at any desired height . . . exclusive, interlocking design virtually eliminates panel-to-post tolerance problems!

The new shape of space now becomes a practical reality with the development of this completely new idea in modern partition systems. GSW satin-finished aluminum partitions are architect-designed to add a feeling of spaciousness, classic simplicity and fine taste to the progressive decor of today's offices.

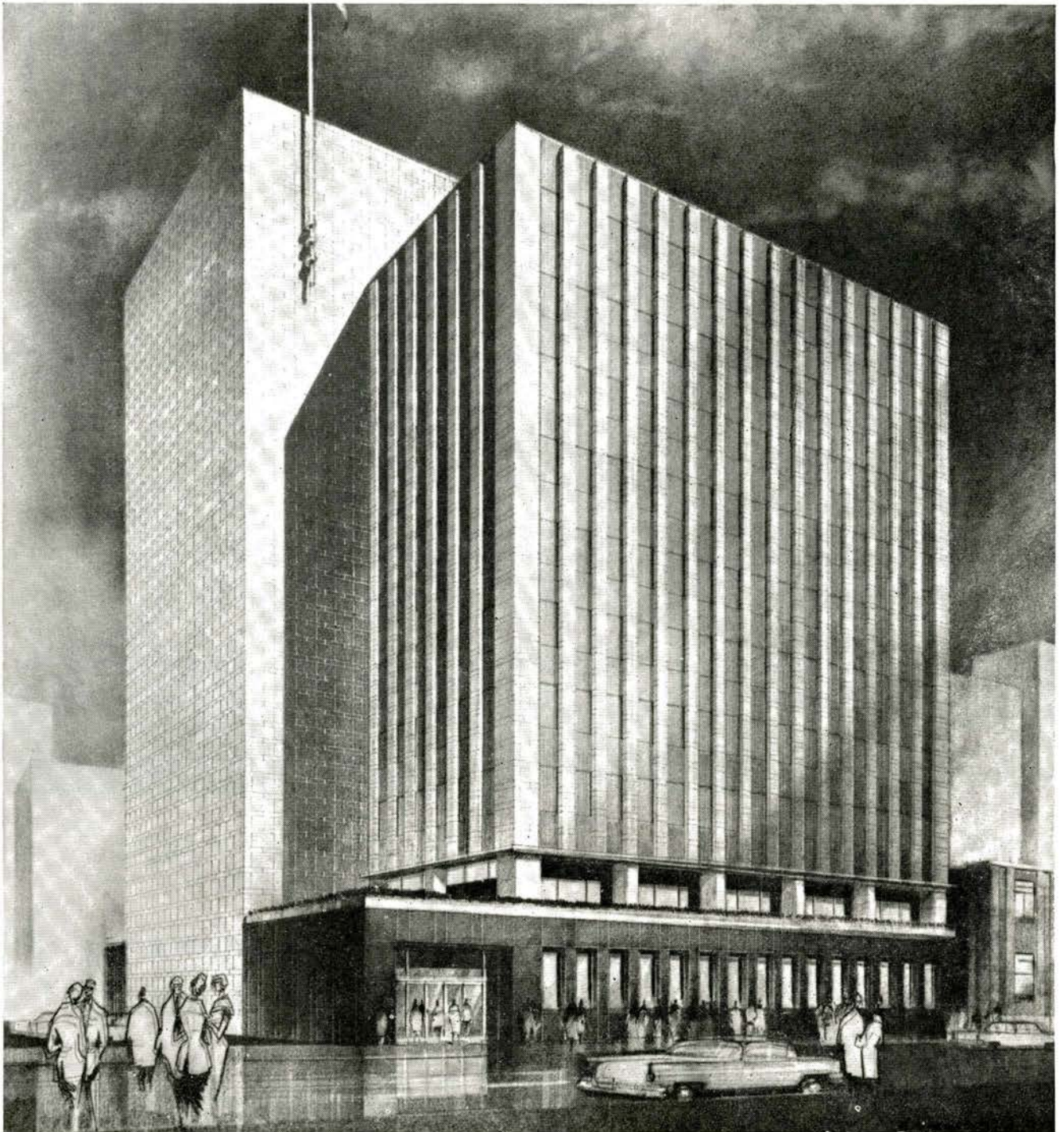
This interchangeable system offers the designer complete flexibility in initial custom installation and subsequent layout changes. Panels are available in steel, wood veneer, glass or plastic, while verticals and horizontals may be accented with colourful vinyl inserts. Installation and layout changes can be carried out quickly, conveniently, and with a minimum of disruption to both your office *and* your budget!

Contact GSW, London, Ontario, for further information.



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Character and Dignity When prestige buildings are required by Canadian companies, **Queenston Limestone** provides the desired elements of distinctive Canadian character and dignity. The clean lines and long wearing qualities of **Queenston Limestone** are assets on which Canadian architects place a high value.

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QUEENSTON QUARRIES LIMITED

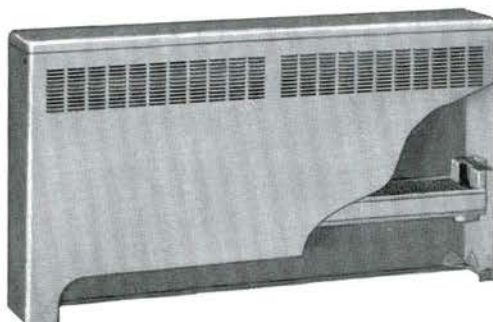
Head Office: HAMILTON, ONTARIO

Quarries: Niagara Falls, Ontario





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EFFICIENT · INEXPENSIVE · DURABLE · ATTRACTIVE

Designed to give complete heating at minimum cost, Vapor Convector are widely used in public buildings, apartments, hospitals, churches and stores.

Always consider Vapor Convector for inexpensive, efficient heating — ask for complete catalogue.

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are constructed of 18 to 20 gauge steel with heavy metal stiffeners for added rigidity. Steel supports hold elements firmly in place without danger of bending or breaking. Over 11 standard cabinet styles are available.

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are mechanically fastened to tubing by expansion — no solder or other oxidizer is present to reduce radiation. Elements are easily cleaned with ordinary vacuum equipment.

GRILLES

are an integral part of front panel, fashioned to add to appearance as well as to deflect warm air. Edges are formed and turned to give added strength and to prevent cutting or scratching.

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When required, a low cost easily installed assembly is available. Knockouts are provided for free standing convectors. For recessed units, valves can be placed below element at inlet end.

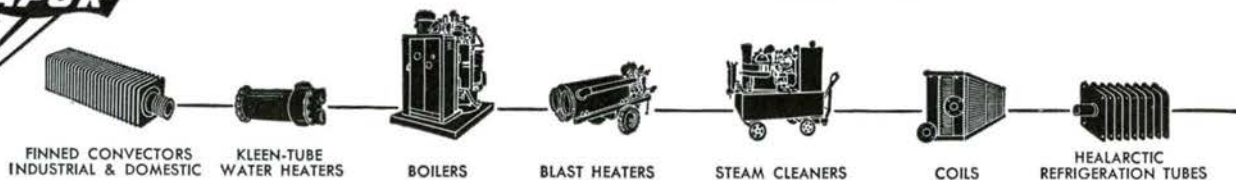
DAMPERS available if desired — with simple knob control.

Trade Mark Reg'd.



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KLEEN-TUBE
WATER HEATERS

BOILERS

BLAST HEATERS

STEAM CLEANERS

COILS

HEALARTIC
REFRIGERATION TUBES

THE KEY *to a modern*

building trend



Architects: S. B. Coon & Son

The new Club House at Rosedale Golf Club, Toronto

Contractors: Richard & B. A. Ryan 1958 Ltd



SAND-LIME PRODUCTS

The Rosedale Golf Club needed a new Club House and Pro Shop. They must not be too modern in appearance but must have a clean fresh look. Also costs had to be kept down.

All these requisites were met by specifying Sand and Lime Brick.

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Sand and Lime Brick now comes in beautiful pastel shades as well as natural light grey and is priced substantially lower than other equivalent types of masonry units.

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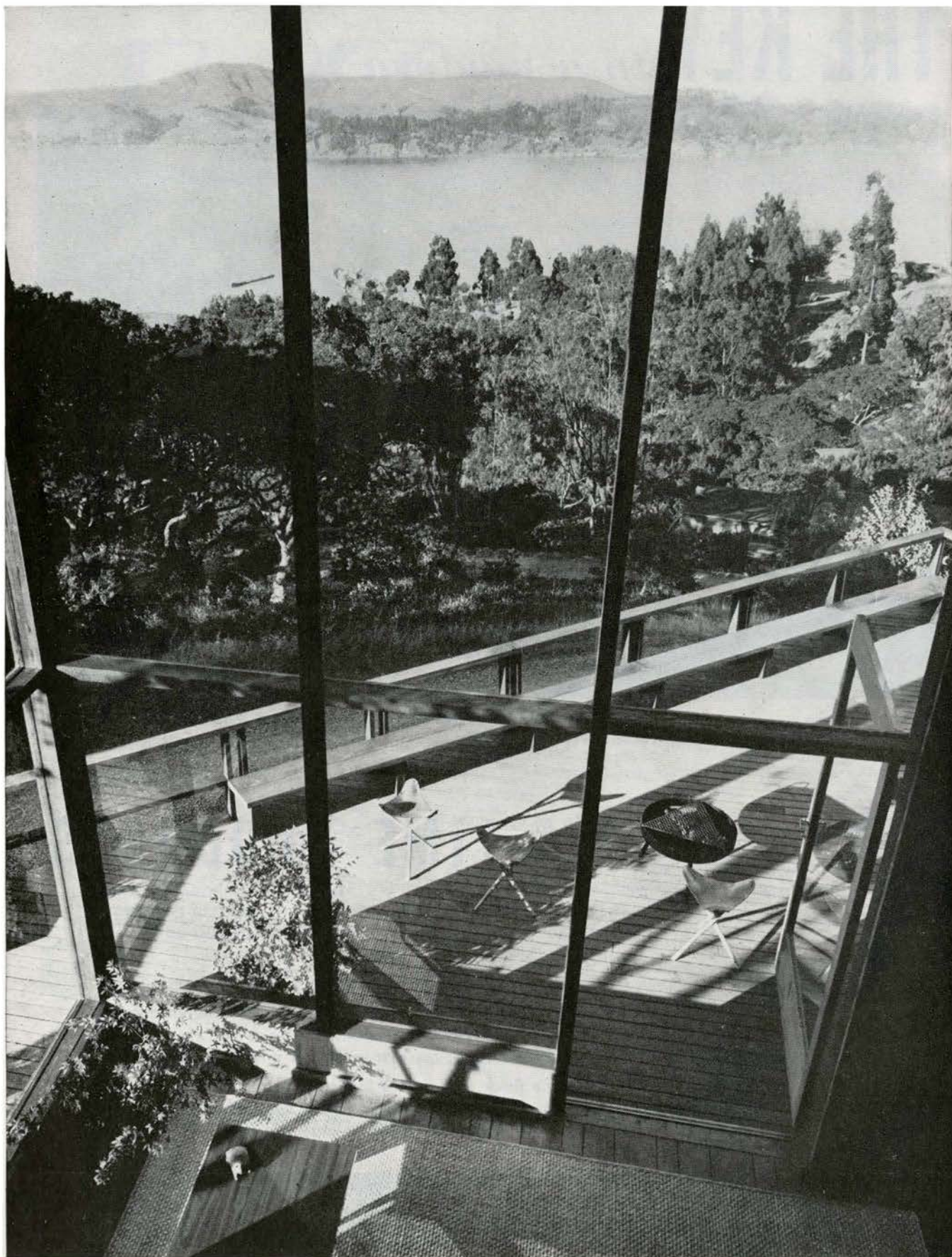
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When durability is a design requirement

for new answers...look to WOOD



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Wind, water, wear and willful neglect stand ready to challenge the mettle of your best design efforts. But in wood you find a natural ally. Wood stands undisputed in its time-proven position as the one construction and finishing material that will withstand the buffeting of the elements — untarnished, uncorroded — actually mellowing with age. No other material offers such diversity of individual shapes and sizes in stock or such a favorable ratio of weight to strength. And what other material is so workable, so amenable to expressive design? For more information on designing with wood, write:

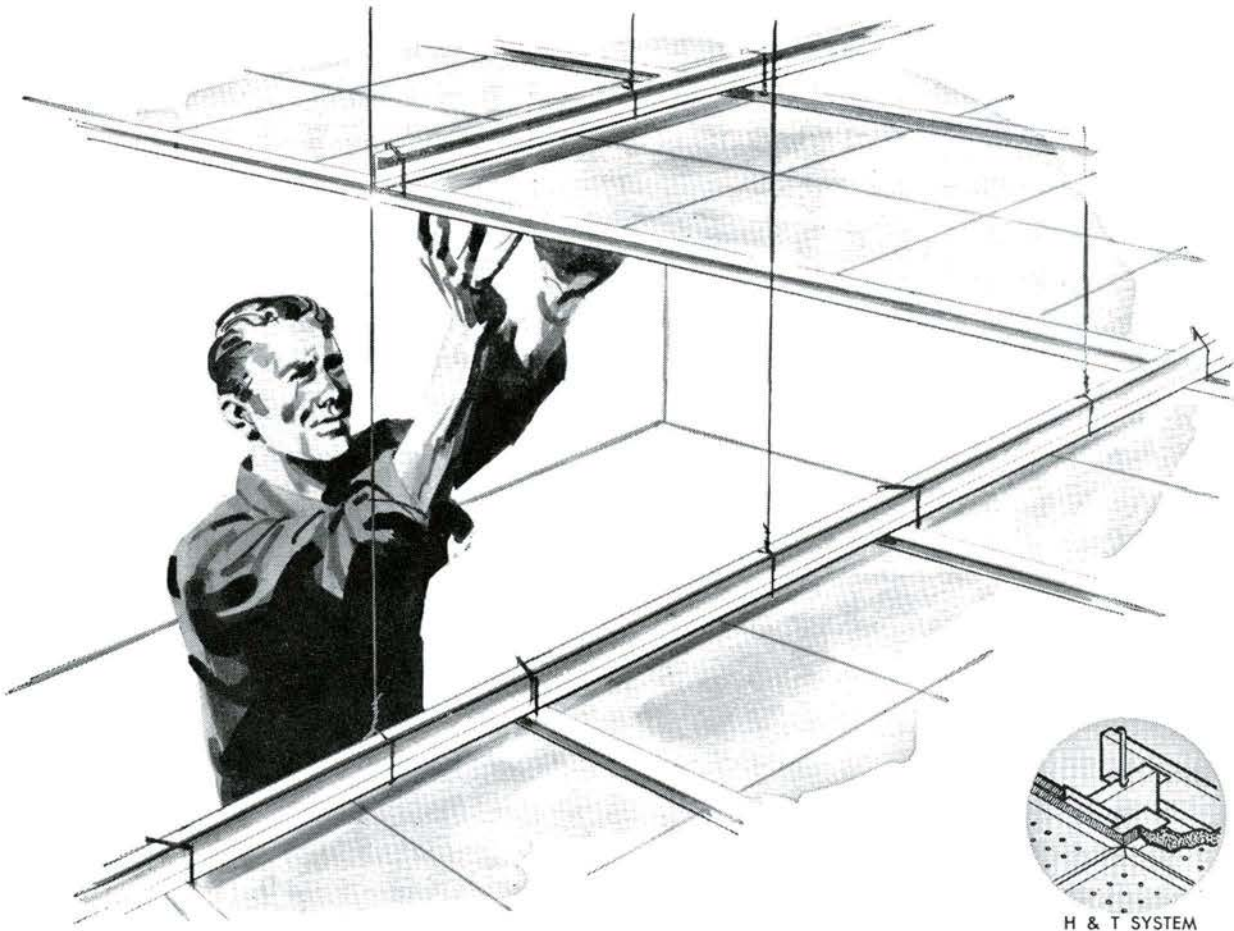
CANADIAN WOOD DEVELOPMENT COUNCIL
27 Goulbourn Ave., Ottawa 2, Ont.

*for freedom of design,
look to Wood*



Wood's wide range of stock components and portability make possible *economical* construction by ordinary carpenters of even the most advanced designs.

Cresswell gives you the most complete line of metal mechanical suspension systems

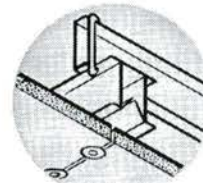


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Cresswell Pomeroy makes every practical type of suspended ceiling system. We supply the complete line — every metal component the applicator requires — and we stock standard systems across Canada for immediate shipment.

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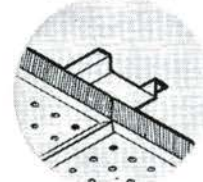
Pioneers of Canadian-made suspended ceiling systems
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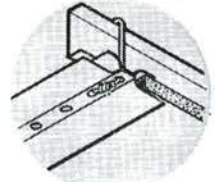
H-BAR SYSTEM



A-BAR SYSTEM



U-BAR SYSTEM



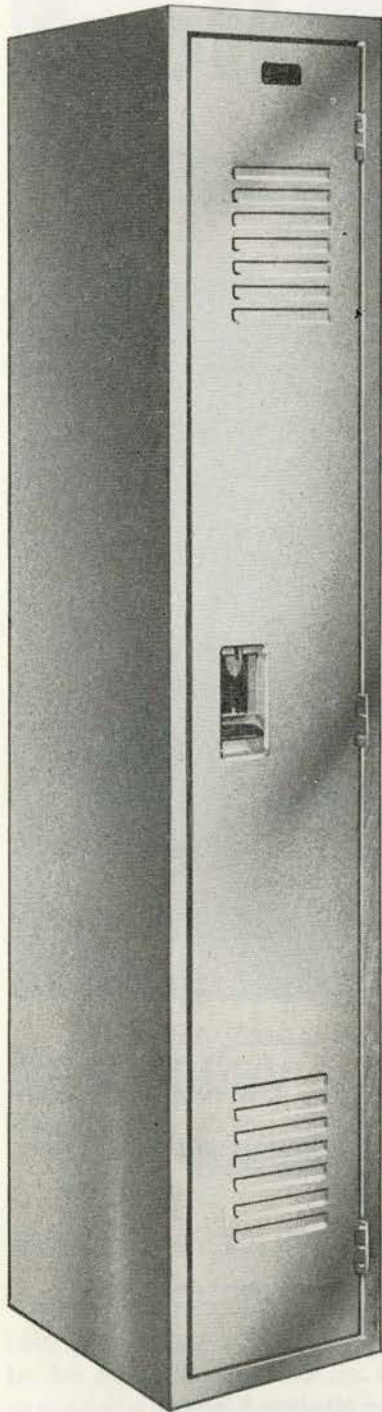
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Cresswell

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"The well-planned features of this Pedlar locker assure complete satisfaction ... smart appearance and efficiency."

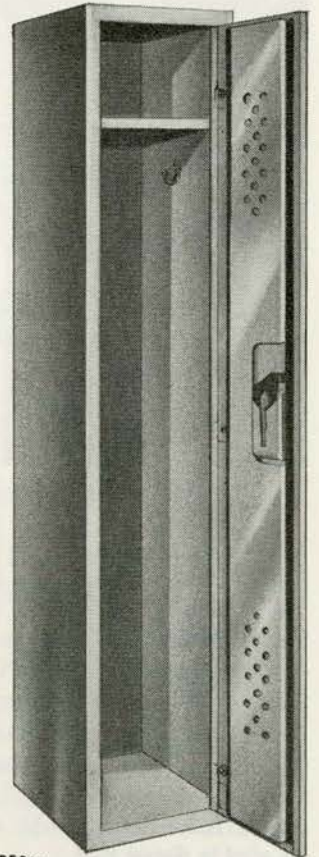


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**SPECIFICALLY DESIGNED
WITH ALL THE MOST WANTED
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"Feature-wise" is correctly associated with the new Pedlar locker ... tamper-proof, sound-dampened lock lifting mechanism with three point latching device ... full length reinforcing pan on door for maximum rigidity ... chrome plated and polished recessed lift handle ... choice of decorator colours. Specifically designed means just that! Pedlar all-steel lockers have been carefully planned and built ... smart in appearance as an individual unit or grouped ... ready to take many years of hard use ... ready to give many years of continuous satisfaction.



Available in a multitude of sizes and options such as special ventilation features; master keyed cylinder locks, recessed bases; sloping tops; coat rods; extra shelves; dummy doors; and metal trim facings.

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Journal RAIC, October 1961

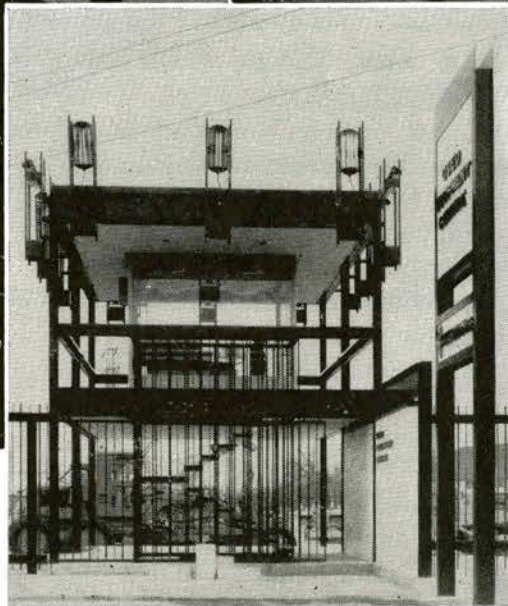
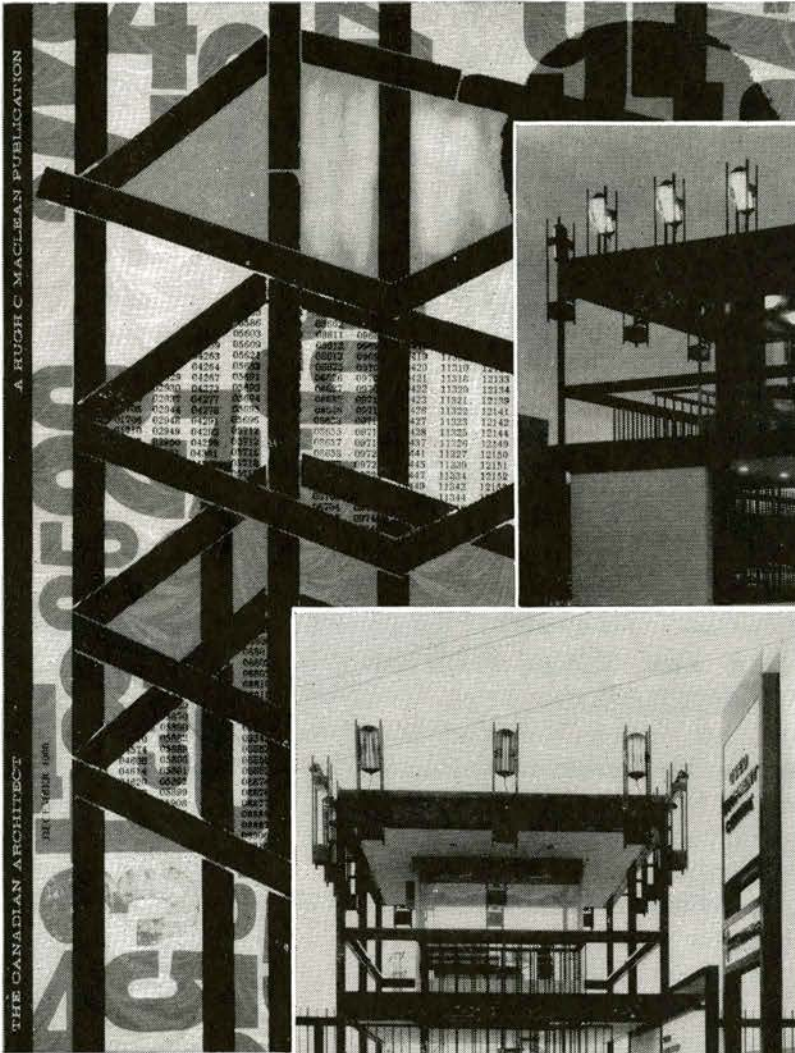


L-61-2C

Raymond Moriyama Associates Chose

MARKEL Electric Heat

More architects are discovering the many advantages of modern electric heating.



GATEHOUSE at LEASIDE, Ont.

Featured in the December issue of *THE CANADIAN ARCHITECT*

"The GATEHOUSE neatly lifts the industrial character of the area in which it occurs, adding a sophistication simply gained . . ."

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Now today's best, least expensive moisture vapour barrier costs less than ever to install

NEW "J FOLD" MILROL POLYTHENE FILM SAVES 40% ON LABOUR—ONE MAN CAN INSTALL IT

Thanks to an exclusive new feature—an uneven fold providing a flange that permits the film to be stapled *before* it is unfolded—one man can easily install a moisture vapour barrier of "J Fold" MILROL* polythene film. Saves 40% on labour costs over centre fold film.

New "J Fold" MILROL polythene film surpasses new government specifications CGSB 70/GP/1 for type 1 vapour barrier . . . CMHC acceptance No. 3662. Full details and a sample are yours for the asking by writing: Mastex Industries, 134 Kennedy Road, Brampton, Ontario.

*registered trade name

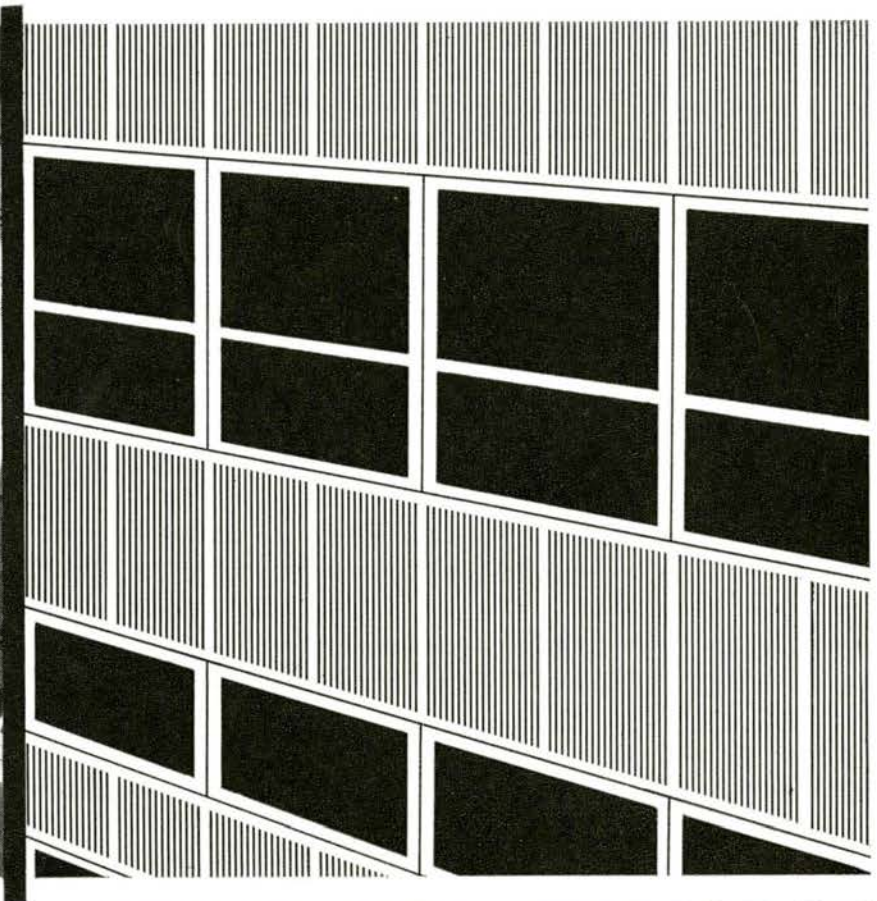
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- Costs up to 50% less than other moisture vapour barrier materials
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PLASTICS DIVISION OF CANADIAN INDUSTRIES LIMITED MANUFACTURES AND SELLS POLYTHENE RESINS AND COMPOUNDS. MASTEX INDUSTRIES, A UNIT OF THE PLASTICS DIVISION, SUPPLIES POLYTHENE FILM AND BAGS FOR PACKAGING, AGRICULTURAL AND INDUSTRIAL APPLICATIONS.

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in the application of the "CURTAIN-WALL" techniques, enter transparent, insulating panels such as POLYGLASS, made from "Duplex" polished plate glass and PANOROC spandrels of non-reflecting coloured and enamelled glass, fully toughened by a special flat process.

POLYGLASS insulating units are made of two or more plates of glass, grounded and polished by the new "Duplex" process. These plates are separated by one or more cushions of dehydrated air hermetically sealed in a plastic joint and protected by a stainless steel frame.

Perfect transparency — Suppression of all condensation.

19 different types: 13 double — 4 triple — 1 quadruple — 1 quintuple.

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Tolerances: on sizes: + 0, - 1/8"
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Maximum sizes: 98" x 59"

4 types: 1 1/8", 1 1/32", 1 1/2" and 1 7/8"

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Net average weight: 7 1/4 lbs./sq. ft.

It is offered in 14 standard shades and in any other shade for quantities exceeding 2,000 sq. ft.

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Architects—Mathers and Haldenby; General Contractors—Jackson-Lewis

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White Pine panelling lends a feeling of solidity and permanence to the hall. The details . . . from trim to mouldings . . . are in quiet keeping. Their cleanly mitred joints contribute to the unobtrusive excellence of the whole.

This craftsmanship . . . and on-time delivery . . . are assured your specifications by Laidlaws Millwork Division. Quality manufacturing to architectural detail has been important to Laidlaws for several generations: wise indeed is the man who entrusts his design to a *proven* source of supply. This man can rely on personal, on-the-job peace of mind and on his client's permanent satisfaction.

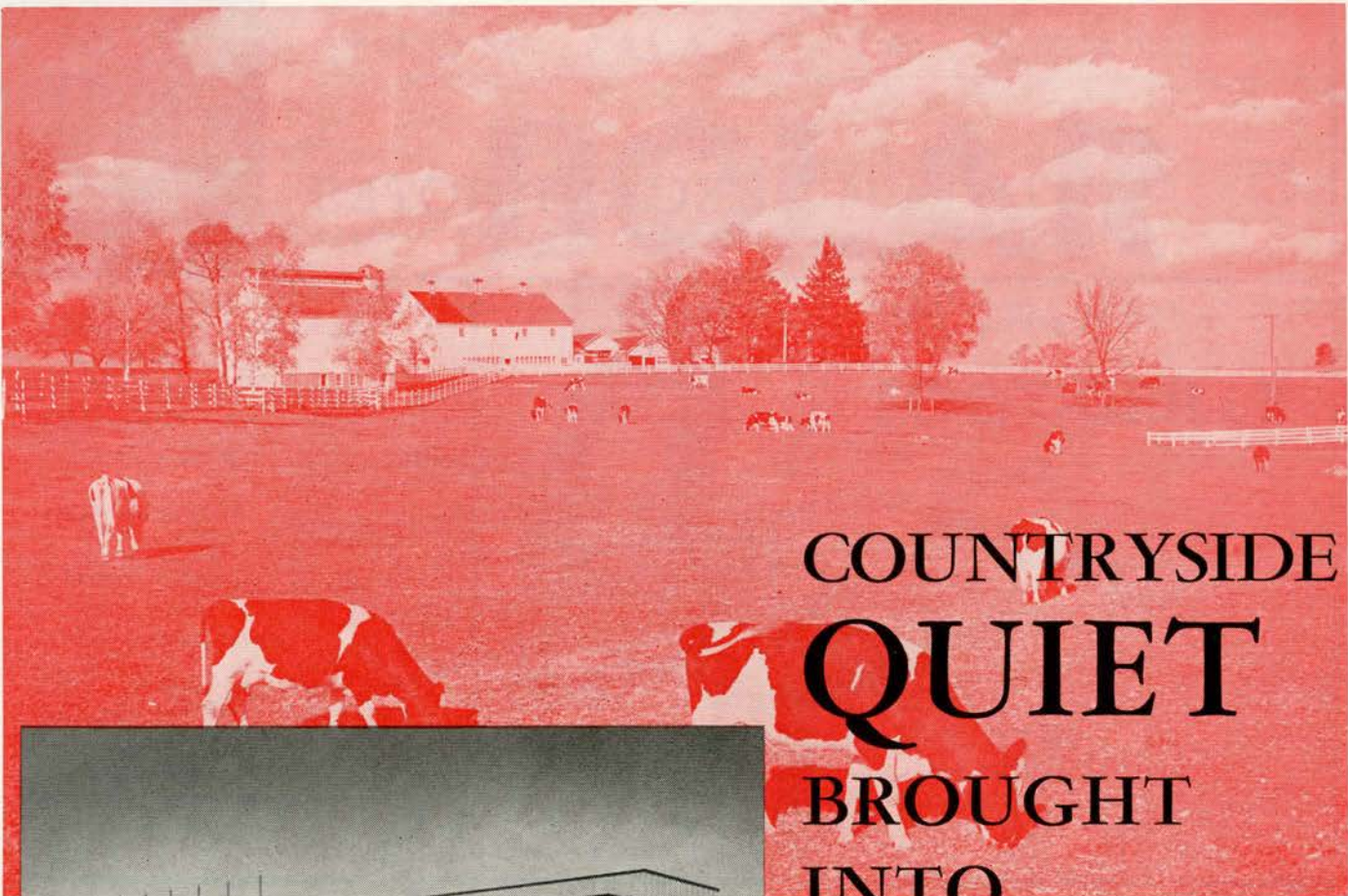
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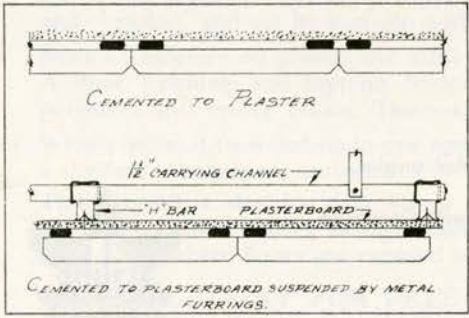
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Architects: Allward & Gouinlock, Toronto.



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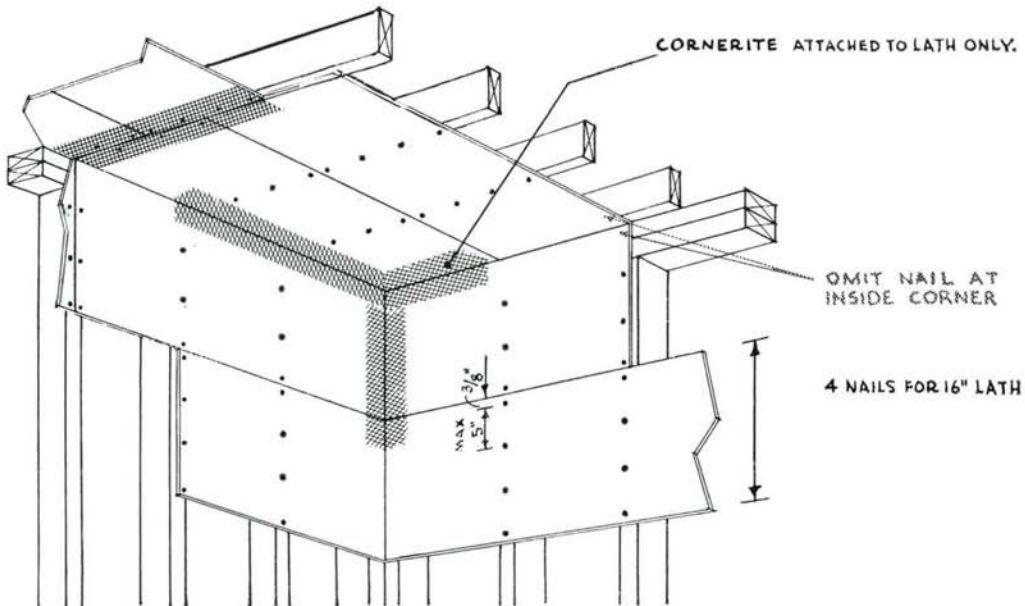
GYPROC TECHNI-NOTES

PUBLISHED BY GYPSUM, LIME & ALABASTINE LIMITED

SUBJECT GYPSUM
LATHING

BULLETIN BP-17

A.I.A. FILE 20B-2



REDUCE PLASTER CRACKS AT CORNERS

by

- The floating angle method of lathing.
- Omit last nail or staple from lath, at internal angles.
- Secure intersecting floating lath together with Cornerite stapled to lath only.



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- Foot-Grilles only are dirt collectors.
- Bolar's have been used successfully thousands of times.
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- Bolar grilles are made for keeps.
- New designs.
- Several materials.
- Various combinations.

BOLAR



THE ORIGINAL
FOOT-GRILLE

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Be sure to specify 1/4" clear spacing between bars, or less, if women are expected to use grille.

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4362 Forest Street Montreal North, P.Q.
Representative in Ontario and Newfoundland:
ART WIRE AND IRON CO. LIMITED
3 Carlaw Avenue, Toronto 8

Inside or Outside ...

THIOPOXY 60 FLOORS DEFY CORROSION

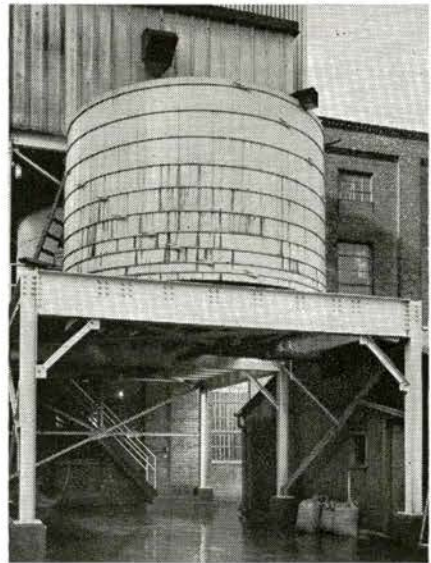
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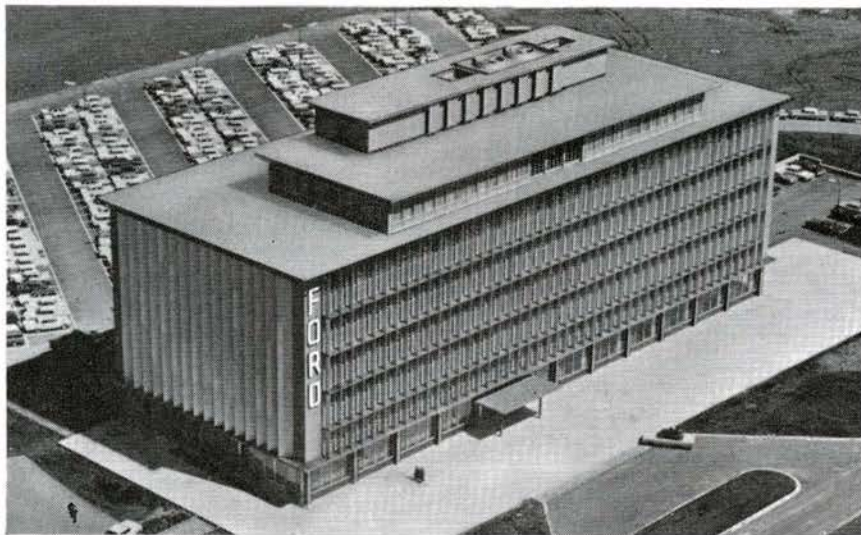
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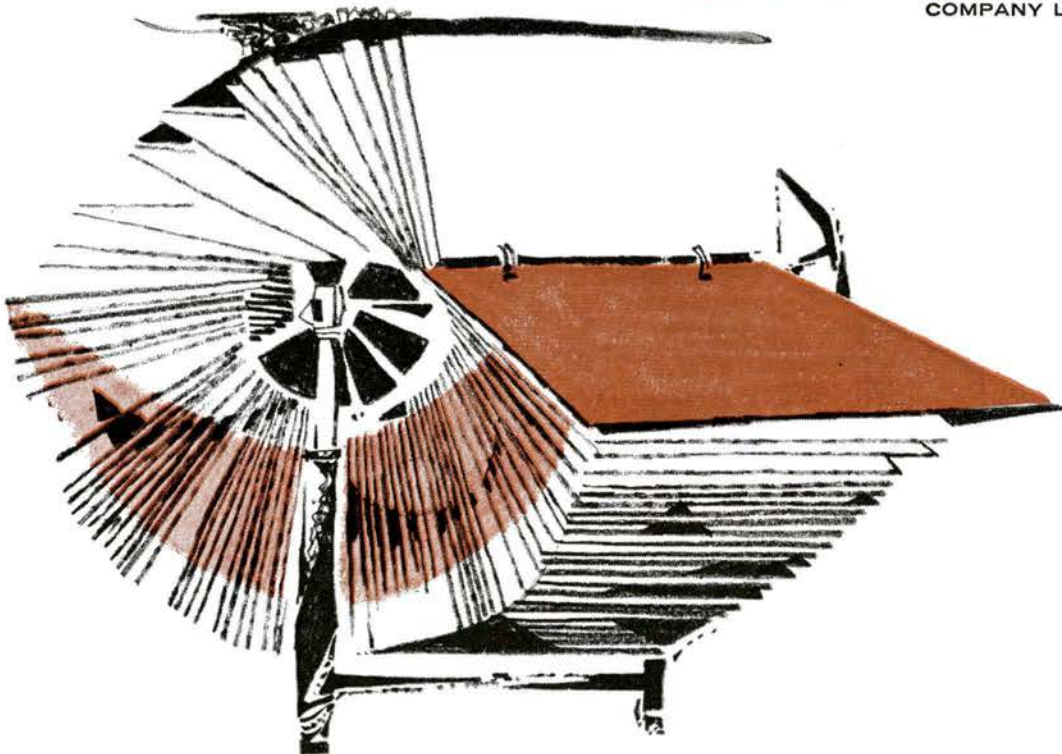
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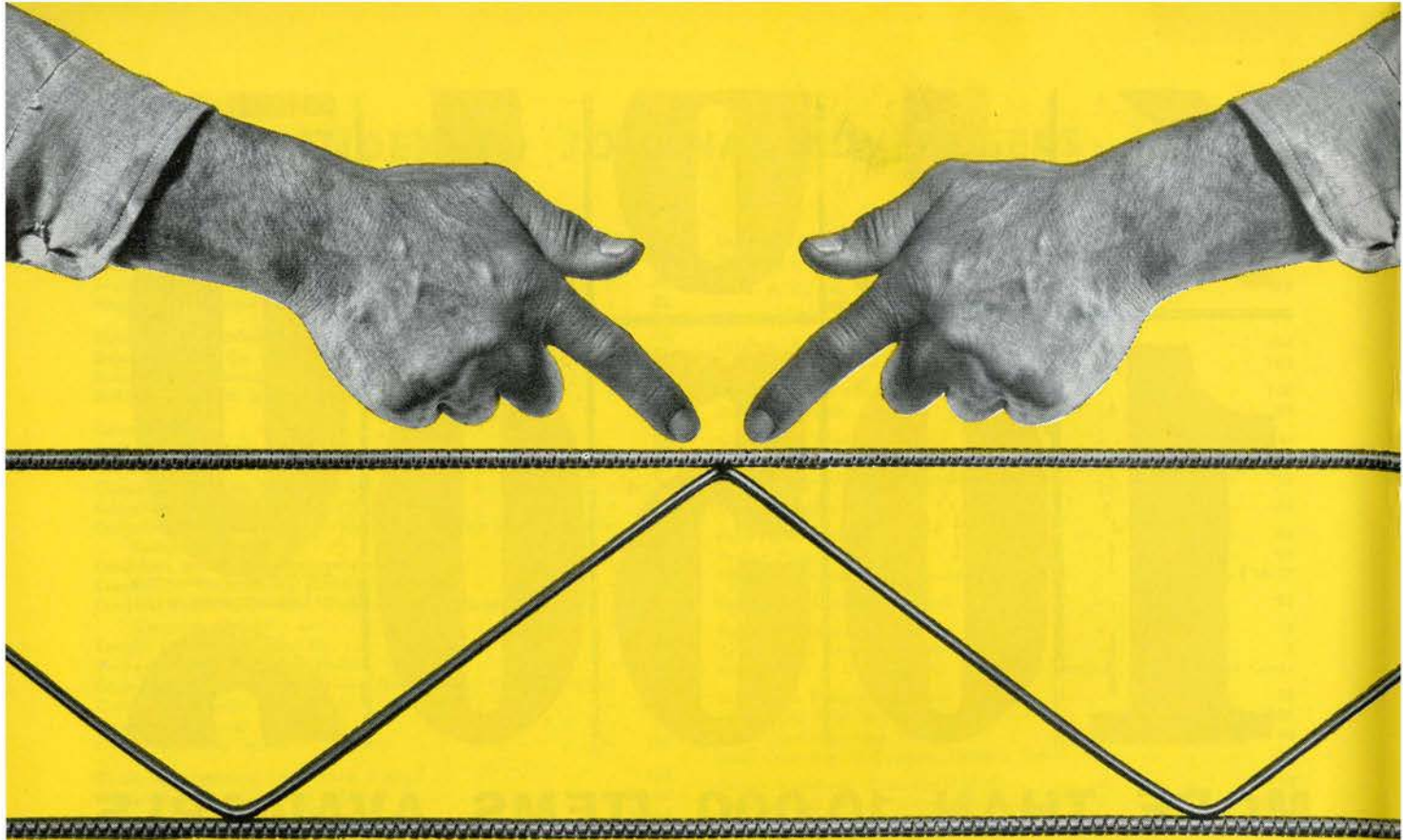
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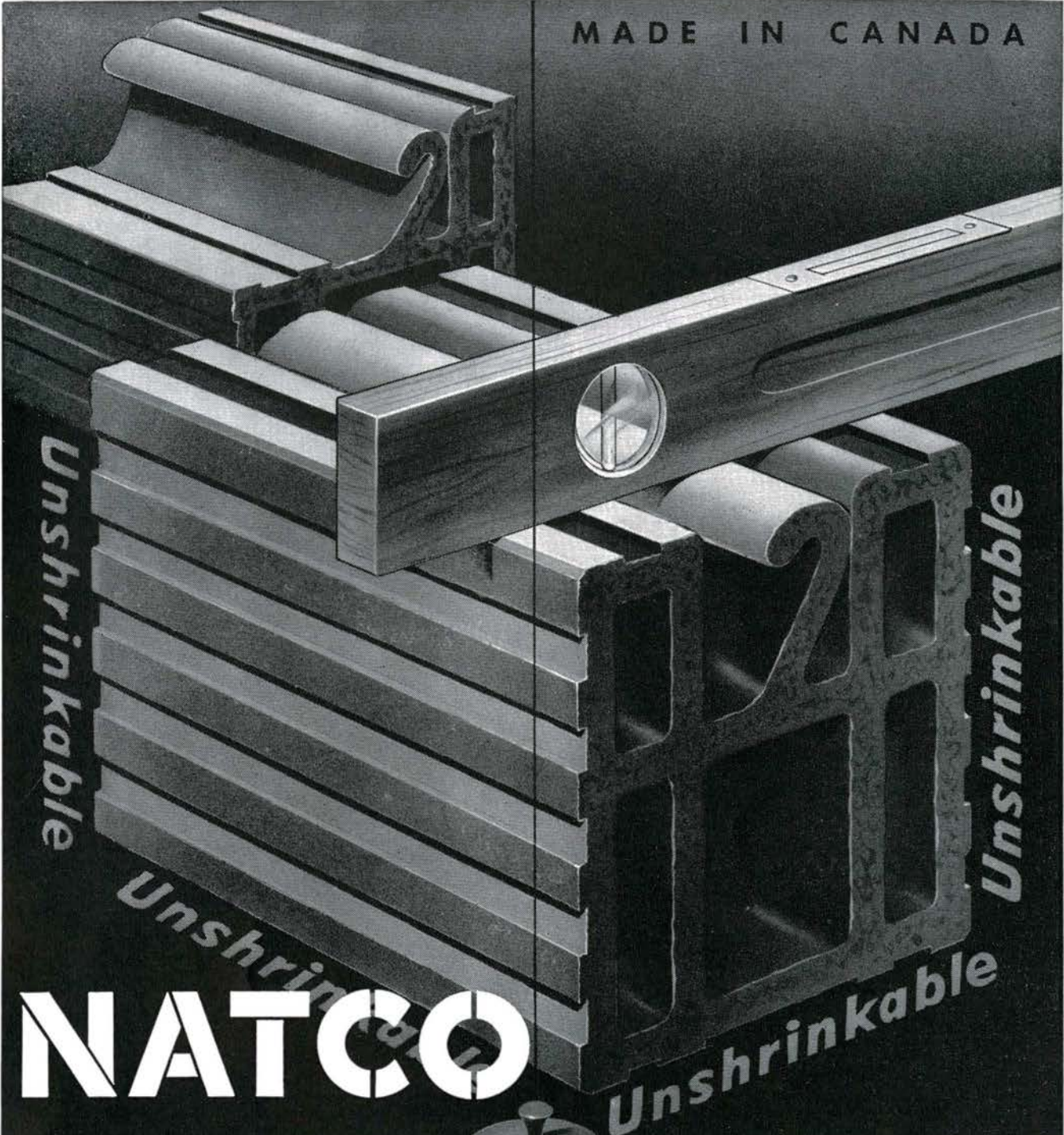
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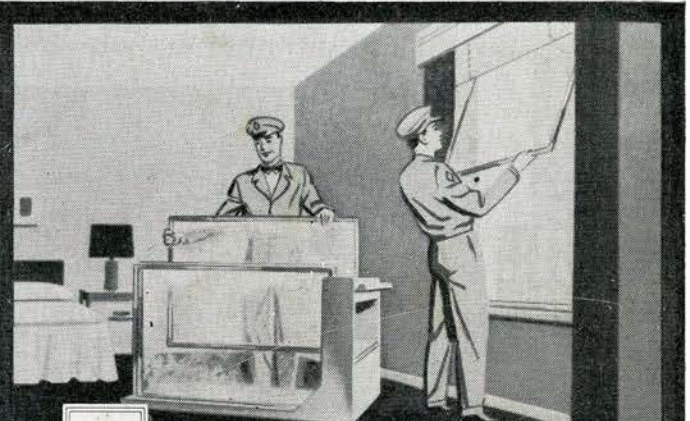
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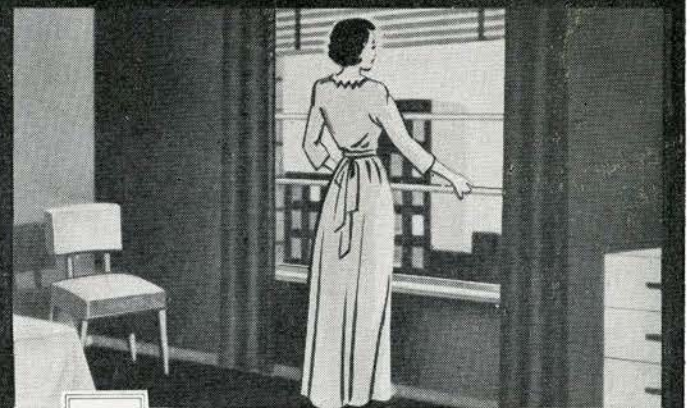
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